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THE

PEDAGOGICAL

SEMINARY.

A QUARTERLY

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INSTITUTIONS AND PROGRESS.

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G. STANLEY HALL,

President of Clark University and Professor of Psychology and Education.

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THE
PEDAGOGICAL SEMINARY.

Founded and Edited by G. STANLEY HALL.

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EDITORIAL.

With the new volume seven, which begins with this number, the editor shares its control with a distinguished list of co-operating editors from whose aid material improvement is to be hoped for.

In the first article Professor Barnes presents a brief study, admirably based like all his work on large numbers of children, from which he is able to make interesting comparisons of the ideals of London children with those of California, whose ideals he had previously studied.

In the second and longest article, Mr. Small presents the results of the fullest and most comprehensive study in recent times known to the editor on the relations between society and solitude. He collected the experiences of many writers distinguished as recluses, isolated himself in the forest for some time, gathered experiences from children and adults, went over prison records and those of feral men, and treats of the pets, productions, imaginary companions, occupations, and educational values of isolation.

Professor Burnham summarizes with characteristic discretion and thoroughness recent literature and present practices of health inspection in schools, with a candid discussion of recent methods and objections, and a valuable bibliography.

Professor Hodge prints a second article on the foundations of nature study, dealing mainly with fundamental principles of education and conditions, which will probably be followed by a third and last article discussing present principles and methods with classifications and characterizations of well known authors and text-books.

A brief study of the imagination in children, especially in doll play, child literature, number forms, and the sex of numbers, comes from Prof. Gale's Psychological Laboratory in the University of Minnesota, with a unique cut illustrating time forms with bibliography.

Dr. Meyer, probably the leading expert in this country on the psycho-physiology and physics of music, presents views on the mode of teaching music in the public schools that, although they will impress many as radical, cannot fail to command respectful attention.

Professor Monroe follows with a brief article illustrating children's rights and altruism.

Mr. Irving makes an interesting contribution to our knowledge of school children's home reading.

Brief book notes on about fifty publications, by the editor, conclude the present number.

It is worthy of note that articles on child study have become so numerous, and especially that their scientific quality has so improved, that some of the best have been and more are likely to be printed in the *American Journal of Psychology*, which is older than the *Seminary* and aims to be more scientific, but has the same chief editor and publisher.

CHILDREN'S IDEALS.

By Earl Barnes.

Some three years ago Mrs. Estelle Darrah-Dyke, who was at that time an Instructor in the Department of Education in Stanford University, California, began gathering papers written by American children with a view to making a study on their ideals. The children were simply asked, as a regular piece of composition work, to answer the question: "What person of whom you have ever heard or read would you most like to resemble? Why?" Miss Darrah gathered about 700 papers written by California children, and an equal number written by children in the city of St. Paul, Minn., some 1,500 miles away. The answers in the two sets of papers ran so closely on the same lines that they were massed together in a common study. The results of this study were published in the Popular Science Monthly for May, 1898.

A year or two later I used Mrs. Dyke's test in England with a view to presenting a parallel and comparative study on London children. In this paper I shall first present the results of the English study, quite independently; and shall then point out the important lines of similarity between it and the American study.

In gathering the materials for the English study we asked the children: What person of whom you have ever heard or read would you most wish to be like? Why? Some of the children had difficulty in understanding the word "resemble" which was used in the American test. It is true the word "like" has a double meaning, but an examination of the papers shows that very few of the children were misled by it; probably not more than one or two per cent. We have gathered and worked up 2,100 papers from Board Schools in London, that is from schools supported and directed by the State and attended by the children of laborers, mechanics, and small shopkeepers only.

Most of the papers were gathered through the efforts of the members of the British Association for Child Study; and from them I have had much assistance in the way of suggestions and criticisms in working up the results. To Mr. H. Holman, at that time President of the Association, and one of Her Majesty's Inspectors, I am under especial obligations for assistance in gathering papers directly from the children where they were absolutely free from any suggestion.

A stream cannot rise above its source; and such a study cannot rise above the value of the individual papers on which it is based. What then is the value of our evidence? Of course there are some papers, especially from the younger children, which are crude to the last degree. Take, for instance, "Moter cod she jase," which has been translated by an ingenious primary teacher into "Mother, because she jaws;" that is to say: "I should like to be like my mother, because she runs things." Even with this far-fetched interpretation such evidence has little value, and if there were much of it the study would have little value. Practically there were only six papers difficult to read or understand in the 2,100 examined. There was a larger percentage from children who wandered in the mists of intelligence. Such are the boy of eight who wanted to be like "Morses because he done something;" or the other boy of eight whose ideal was "Mrs. Goodey because her sister was a kind girl." More intelligible is the child who says: "Queen Victoria, because she is very grateful." He simply attaches a verbal virtue which he, as one of the masses, has been told was desirable to a verbal personage whom he has been taught embodied all perfection. Still more intelligible is the boy who wished to be like "Lord Nelson, because he had one of his eyes pierced with an arrow and one of his arms cut off." Does this not mean: "I want a brave and adventurous life?" In dwelling on these answers we are giving a wholly wrong impression of the evidence as a whole. Such papers represent less than one per cent. of the 2,100 examined. In all studies on groups of children such papers are found and the superficial critic seizes on them and orders all the evidence out of court.

The following papers represent the general average of the evidence; they are neither the poorest nor the best:

A boy (13): "I should like to be J. Smale because he has 3 pony and two horses he as got a good green grocers round and he takes about eight pounds ten shilling on Saturday."

A girl (12): "My mother, because she is kind and humble and she is a proper housewife she is not like some mothers out all day long and row when she comes home. She works very hard for the sake of the little ones at home. She is also very gentle and keeps us children very clean and respectable, however poor she may be."

A girl (13): "The person I most wish to be like is my grandmother, because she is kind and gentle, and she lives many miles away, in Norfolk. She is happy and so rich. When I go down their, she treats me so kind as if I was her only daughter. I wish I could be like her because of her riches and living in the open country and on sunny days go and pick flowers and water the garden and be like a lady sit still and do nothing all day but to enjoy yourself and keep your home clean and keep your clothes clean and keep your husband clothes clean and the little children as well."

Another girl of the same age: "My uncle. Why because he lives in an oil shop and if any one came in the shop I could serve them and another thing I cannot say anything wrong about him and he is very kind to me and all my sisters and my brothers and is kind to his own children and one day when my father was ill in bed my sister emmer come and brougt her little boy and my uncle come and gave me a shilling and my sisters boy a shilling."

A girl (11): "I should like to be like my cousin Maud, because she is the only child, and is treated so well, and has so many toys and playthings. Another reason is because she lives in the country, and she has part of her father's garden and goes to the seaside for a long time every holiday time."

This is a pathetic answer from a girl of thirteen: "I should like very much to be like a girl who can do all her work perfectly, so that I could do my work just as well and when you can do your work there is such a difference in a girl who can do her work and one that cannot do it at all and the better you do your work the better your get on in life."

There is every indication in this last little paper, in penmanship and in lack of punctuation and organization that the girl stood at the foot of her class and wrote from the depth of her heart. As a whole, the papers presented have a wholesome ring of truth in them. As evidence, I believe them superior to the testimony ordinarily accepted in police courts or petty civil courts, here or in England.

Accepting the evidence now as fairly representative of what the children wanted to say, let us see what quantitative results we can reach by analyzing it. Out of the papers studied, 15% of the boys and 3% of the girls give no intelligible answer, most of them returning the paper blank.

If we look at the movement from age to age the per cents. read:

Age,	8	9	10	11	12	13	
Boys,	15	32	19	9	8	5	per cent.
Girls,	1	7	4	4	1	3	per cent.

Two things are striking in this list of figures. First, there are five times as many boys as girls who fail to answer; secondly, the children nearly all answer at eight, while at nine many of them fail to do so, and after that the number of those who fail to answer grows gradually less year by year. These two facts seem to me to be due to the same cause,— girls are more obedient than boys, they do what they are told to do; children of eight are also obedient, they try to do whatever they are told to do. At nine, they see the difficulty and fall off; later they become increasingly able to express an answer satisfactory to themselves. Children answer when they must or when they know.

About 8% of the children, instead of naming some person, name some general class like bakers, or teachers, or good men.

These answers form a strand of selection of no particular significance for this study.

Under the heading "Acquaintance" we included all those whom the child knew personally. Two special sub-groups were kept out for individual study, "Father and Mother," and "Child Acquaintance." Let us deal with these sub-strands first. 5% of the boys and 3% of the girls select the father or mother as their ideal. The boys choose the father and mother equally, while nearly all the girls choose the father. The number of those making this household choice decreases gradually with advancing years. 3% of the boys and 5% of the girls choose some child acquaintance. This choice also belongs mainly with the younger children and disappears as they grow older.

Uniting all the acquaintance choices we find that 24% of the boys and 32% of the girls select as their ideal of life some person in their immediate circle of acquaintances. It is interesting to see how these answers are distributed through the ages from 8 to 13 inclusive.

Ages,	8	9	10	11	12	13	
Boys,	42	40	26	11	16	15	per cent.
Girls,	49	51	37	27	18	14	per cent.

As will be seen, this line of tendency is a steadily vanishing line. It marks the abandonment by the child of his local neighborhood dreams because he is reaching out for a new world of men.

This larger world is found under the next heading, "Historical or public characters." Here again we have found it convenient to keep out certain particular strands for closer study. They are: "Queen Victoria," "Florence Nightingale," "Gladstone," "Nelson," "Wellington." Let us examine these lesser strands first.

Queen Victoria is a most popular character, being chosen by no less than 8% of all the boys and 18% of all the girls. Florence Nightingale is chosen by 3% of the girls; Mr. Gladstone by 5% of the boys and 2% of the girls; Nelson by 8% of the boys and 2% of the girls; and Wellington by 2% of the boys. It is surprising what a small range of public characters are named. Apparently the popular heroes of the day and the great men and women who have made England's name glorious have no very intimate place in the hearts of the Board School children of London.

If now we take all the historical and public characters together we find that they are chosen by 41% of the boys and 32% of the girls. And again it is interesting to see how they are distributed by ages:

Ages,	8	9	10	11	12	13	
Boys,	17	17	34	50	60	69	per cent.
Girls,	26	14	21	40	46	44	per cent.

This is distinctly a growing strand of consciousness, or of choice. It marks the broadening out of the personality, and the substituting of larger political, social, and world dreams for those of the home and the neighborhood.

One is surprised to find how very few literary characters are chosen by these children. In all such choices include only 2% of the boys and and 6% of the girls. Even these are rarely literary characters in any true sense of the word. They are generally people who have written literature, while the great mass of possible ideals that fill our works of myth and romance seem to play an insignificant place in these children's lives.

On the opposite hand I was surprised to find how many children gave God or Christ as the one whom they wanted to imitate, 7% of the boys and 14% of the girls make this choice. Bible characters play a small part, mainly with the girls—4%. It is not surprising that in a country where,even in schools under State control, forty-five minutes a day must be devoted to religious instruction, a large number of children should try to express their ideals in the Deity. It does seem surprising that David, and Samuel, and Esther are such weak influences in the children's lives.

If we come now to consider the reasons for the choices that are made, we find that while exact lines of classification are difficult, we can still unravel many lines of tendency that are full of suggestion.

Under "No reason" we find 22% of the boys and 5% of the girls. Thus there are more children who give no reason than there are who give no choice, and here again the girls show a conscientious effort to do what they are told to do; that agrees with what we had already observed.

Vague undeferentiated goodness is the quality in characters that is generally declared to be the thing that makes them attractive. Thirty per cent. of the children do not get beyond this. "Good and kind" is a phrase of which the English children never tire. "I should like to be like my mother because she is good." "I should like to be Queen Victoria because she is good and kind." In this reason, we may be told, the children are mouthing phrases, only a little more markedly than in the other parts of the study. I do not think this is an entire explanation. The masses, whether children or adults, feel drawn toward particular concrete characters, but their sense of human qualities is not well defined, and good man and bad man still rule a large part of our expression.

Those who give the possession of wealth in any form as the reason for their choice, include 10 per cent. of the boys and 14 per cent. of the girls. This is a much smaller proportion than I should have expected. It seems singular, too, that the girls of the English working class should be more drawn toward money than the boys are. It may be due to the fact that in a great city the girl is constantly running back and forth for little supplies for the shops, and so comes to have a sense of money as desirable. "I should like," says a girl of eleven, "to be Queen Victoria, because she is rich, she is well cared for, and can have whatever she wishes for, and because she has people to wait upon her, and she has a beautiful castle to live in, and because she has the best food there is, and is never in want of money."

Some form of philanthropy, or desire to help others, is declared by 13 per cent. of the children to be their reason for choice. The distribution of this reason by ages runs:

Ages,	8	9	10	11	12	13	
Boys,	0	2	2	9	8	15	per cent.
Girls,	1	8	12	18	35	49	per cent.

This line agrees with other similar strands found in studies on future occupation, in being very much stronger with girls than with boys, and in springing into great activity with girls at twelve and with boys a year later.

Love of glory and power are given by twenty per cent. of the children, distributed thus:

Ages,	8	9	10	11	12	13	
Boys,	16	9	16	24	27	23	per cent.
Girls,	10	6	13	22	29	31	per cent.

Intellectual qualities determined the choices of but 6 per cent. of the children; agreeable personal appearance, 4 per cent.; a pleasant and agreeable life, 8 per cent.; and bravery and adventure 11 per cent., the last being almost exclusively a boy's choice.

In connection with the English study we worked up the data from one Board School located in a better part of London and having a superior staff of teachers. The results for the two main lines of choice are instructive:

ACQUAINTANCE IDEAL.

Ages,	8	9	10	11	12	13	
All-London,	46	45	31	19	17	14	per cent.
Special School,	38	22	20	18	12	7	per cent.

HISTORICAL OR PUBLIC CHARACTER IDEAL.

Ages,	8	9	10	11	12	13	
All-London,	21	15	28	45	53	56	per cent.
Special School,	50	62	52	55	62	63	per cent.

Under the better conditions of this school we see that the children drop their local ideals and take on their larger ideals more rapidly, year by year, than do the children in the average London school. Such studies could be made to advantage in any school building, and they would help to establish a standard rate of growth in ideals which we could accept as desirable.

Let us now compare the results reached in the American and in the English studies. Such comparative studies doubtless mark a new era in the field of investigation, but in comparing American and English school children we have to meet a very great difficulty. In America all the children are in the State schools; in England only the children of the laborers, artisans and shopkeepers attend these schools; hence in all comparisons of children in the State schools we must remember that we are comparing all classes in America with the masses in England. On the principal lines of choice the comparison runs:

ACQUAINTANCE IDEAL.

Ages,	8	9	10	11	12	13	
American,	33	22	20	12	8	5	per cent.
English,	46	45	31	19	17	14	per cent.

HISTORICAL OR PUBLIC CHARACTER IDEAL.

Ages,	8	9	10	11	12	13	
American,	30	50	59	68	75	78	per cent.
English,	21	15	28	45	53	56	per cent.

The expansion of personality with an American child is much more rapid than with a London Board School child; but if we turn back and compare our American lines with the Special School representing the best London conditions we find the lines nearly parallel.

A very interesting line of comparison gathers around the choice of male characters by girls. Boys very rarely choose a woman as their ideal; but in America half the girls at eight, and two-thirds of them at thirteen, choose some male character as their ideal. The comparison of the two countries runs as follows:

Ages,	8	9	10	11	12	13	
American,	48	52	53	58	63	62	per cent.
English,	13	10	16	17	12	14	per cent.

After some years of residence in England I am inclined to think these lines represent fairly well the relative intensity with which girls in the two countries are reaching out after the larger life lived by men.

The following generalizations seem borne out by the facts so far presented:

1. Half the children in the London Board schools at eight years old find their ideals in some local person in the home, in the school or in the neighborhood.
2. With advancing years they tend to reach out for their ideals into the larger world of public or historical characters.
3. This expansion of the personality follows definite lines of tendency, which can be expressed quantitatively for any group of children for purposes of comparisons with other groups, or to test rapidity of growth within the same group.
4. This movement is decidedly less rapid with the children of the London Board schools than with the children in the common schools of America.
5. It is decidedly less rapid with the girls in the London Board schools than with the boys in the same schools.
6. American girls are reaching out after ideals of life represented by men much more rapidly than their English cousins are.
7. The most prominent single character with the English children is Her Majesty the Queen. Next comes Nelson, and then Mr. Gladstone. In America Lincoln and Washington lead.
8. Deity and Bible characters furnish a large range of ideals for these children, about the same as for the children in Minnesota, though twenty times as much as for the children in California.
9. The characters of literature play a very slight part in the life of the children in the London Board schools, as compared with those in the American schools.
10. There is a very small range of world ideals operative among the children studied; the range of important woman ideals in use among the girls is surprisingly small.

The application of the generalizations that we have reached, to educational practice is another matter, and a very difficult one. In education, as in medicine, the first thing to do is to diagnose your case. The treatment will then depend upon what you want to accomplish, upon what you know about medical practice, and upon what medicines you have at hand.

In this particular case one must decide first whether he wants the children in the London Board Schools to live their lives in a range of ideals made up of relatives and the shop keeper around the corner, with a gradual expansion into the ideas that gather around in their Queen and their Bible, or whether you want them to go out, in their dreams at least, into the life represented by the great creative and artistic forces of the past and present—forces represented by Balder, Perseus and Robinson Crusoe, by Gordon, Stanley, and the long line of great men and women who have been England's pride and glory.

I think we shall all agree to this, that if one's personality is expanded too fast it will lead to disintegration of character and reckless living. If, on the other hand, it is expanded too slowly, we shall have that arrested devolopment which makes good ground in which to grow stupidity, brutality, and drunkenness, the true fruits of a sluggish and self contained mind.

Is it not true that with girls we are furnishing in our State schools in both America and England a totally inadequate line of womanly ideals?

Some years ago Dr. G. Stanley Hall pointed out in his study on The Contents of Children's Minds on Entering School that we were still using a curriculum in elementary education that had been developed in an agricultural community with children living under city conditions. Is it not also true that we are still using a curriculum developed largely in boys' schools for co-educational work? If you doubt it read any of our school histories. Are Calhoun and Stonewall Jackson the best ideals to hold before young girls? Have America and England produced no women to act as centers of growth for our girls?

These questions, as you see, are too intimately connected with the most fundamental problems of national character and national policy to be dealt with lightly.

Certain it is that if you will provide the schools with that wealth of myth and romance so abundantly available to-day, and if you call into the schools the long line of noble and generous spirits who have been the inspiration of America's and England's leaders, and present them to the children in attractive forms of story you will change these lines of development. Whether it ought to be done or not is another matter.

This study also throws some light upon certain large criticisms brought against the method it employs.

In the first place it is said that the children have no ideals, that such as they have they cannot express, that they will merely repeat phrases or say smart things, and that, in a word, their answers are merest caprice. The answer to this statement must rest partly upon the internal evidence of the papers themselves. I have discussed this question with fair illustrations at the beginning of this study; in these English papers there were not more than three or four that tried to be funny;

and after some years of work with similar papers in America and England I feel increasingly that if ordinary children are treated earnestly they respond earnestly. As to the criticism that there are no law-abiding tendencies in the development of children's subjective lives, the figures presented in this study are sufficient answer. No one can consider the regularity with which local ideals die out and are replaced by world ideals without feeling that he is in the presence of law-abiding forces. The fact that while these lines are different with boys and girls, and with American and English children they still remain parallel, but emphasizes the fact that a teacher or parent works in a world governed by law, not caprice.

Great events that fill the public consciousness doubtless influence the results of such studies. Three days after Mr. Gladstone died, when he was lying in state at Westminster, when all the papers were published with mourning borders and when his picture was being hawked in every street, I tried this test in a boys' school in London. The choice of Mr. Gladstone mounted from 5 per cent. to 42 per cent.; two weeks later it had dropped to 7 per cent. In our recent study in Boston, Admiral Dewey, who was chosen by no one in Miss Darrah's study, had a following of 30 per cent. Well, that is one of the facts with which modern educators must deal. Because the temperature of the body mounts with fever shall we say that the normal temperature cannot be determined?

But, our critics continue, such studies simply diagnose the case; they cannot tell us what ought to be. Here again they are certainly wrong; it is the only way in which we can tell what ought to be. If such a study could be repeated in a hundred places, a consensus of opinion would determine when the children are living under the sanest and most healthful conditions. Many considerations, historical, sociological, economic, political and racial, would need to be combined in such a judgment, and in that locality we should be able to establish a standard toward which other localities should be drawn. What we need in this field, as in botany, is not the exploitation of here and there a picturesque field, but the flora of each locality, no matter how common-place, must be worked up that we may rise in the understanding of the larger laws governing the development of childhood.

ON SOME PSYCHICAL RELATIONS OF SOCIETY AND SOLITUDE.

By MAURICE H. SMALL,
Sometime Fellow in Psychology, Clark University.

Power of voluntary movement constantly flatters people with the notion that they are independent of their race. Numerous wants and the necessity for undertaking great enterprises, as constantly bespeak ethical relations and social interdependence. Drawing sweeping conclusions from hasty and partial views, one class of men bewails the decay of individuality and seeks to wall itself about with exclusiveness; another spurns every vestige of individual difference and prays that God may speed the day of socialism in all its irradiations. Neither class attempts to give a logical or a philosophical reason for its position. In the library, both classes find the poet, the classical artist and the religious recluse praising solitude: on the street, everything from the dual performance of the organ grinder to newspaper accounts of the incubation of trusts, indicates the rapid action of social forces. Before we can pass judgment upon the relations between these supposedly opposite modes of living, it is necessary to ask which, if either, is the more natural. The answer will be found, if anywhere, in the conditions under which life evolves and in the institutions which men have developed.

I. THE EVIDENCE OF BIOLOGY AND HUMAN INSTITUTIONS CONCERNING SOCIAL LIFE AND ISOLATION.[1]

The consensus of biology rests the idea of unity upon the individual cell. In the generally accepted "Life-Series," the Protista may be fairly regarded as living independent lives. In complex organisms, blood cells, lymph cells, and chyle; ova and spermatospores after they are set free from the epithelium of their secreting organs, are classed among free cells.[2] Among these and other simple organisms, many, which seem individual, are not deserving of the name.[1] In morphology they are complete; therefore they stand for units; but if they are separated from the colony to which they belong, death results.

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[1] With an increasing sense of obligation and with deep gratitude for their willing assistance, the writer expresses his thanks to the lecturers of Clark University and to President Hall, who freely gave the use of many books not readily accessible in public libraries, and who generously made suggestions from the results of his personal studies.

[2] Claus and Sedgwick: Zoölogy, pp. 32–34.

So far as known, no cell ever springs to life save from another cell. In all the varying details of the reproductive process, from the development of zo-oids by simple fission and from gemmation through the higher gamogenesis, the idea of community inheres. In the self-division of the Rhizopoda,[2] in the encystment of the Flagellata, in the internal budding of the Noctilucæ, and in the rapid division that occurs in colonies of Vorticellæ at the approach of a conjugation period, each new individual goes out from community of life to be only transitorily free. Of this community, no one can mark the beginning. The old and the new are there. Their relations are relations of interdependence and reciprocality. If we accept the dictum of Weismannism as to the continuity of the 'germ plasm,' multicellular organisms have arisen from unicellular, the germ cell is older than humanity, and men must seek the source of their gregarious instincts in the history of a hereditary community set up simultaneously with the beginning of life, subsisting through its varied metamorphoses, and immortal.

In cell groups like these, one stands face to face with identity of life-substance and similarity of structure. These may be fairly assumed to imply common needs, like appetencies, similar affinities, and corresponding reactions. The broadest basis for joint effort between the individuals of a group is the natural resultant of impulses and reactions such as these. Next to the reproductive colony already mentioned, and the regenerative colony, which exists for special repairing, the forming of a colony for the purpose of obtaining food is the most familiar example.

Although the ultimate nature of the affinities which bring cell groups together is not positively known, and although conditions are such as to baffle observation in this field, among organisms with a wider range of activities, observation is comparatively easy. It readily appears that the simplest of the more externally related forms of community, consists of a mere symbiosis. It is unsocial and accidental, yet no corner of the world is free from it. It appears to some extent among the Protozoa and the Polyps. Among the Labelliphili and the Abdominalia, the males are parasitic on the bodies of the females. The larva of the Sitaris feeds upon the eggs of Anthophora until its moults are complete.[1] The Meloe is carried into hives on the backs of bees. Unciliated Rotifera attach themselves to the Annelida; leeches fasten upon the Homaridæ, the Diadema and the Tubinicella live upon the head of the whale; and the Remora finds a host in the shark. The larva of the Œstrus ovis is a common pest of the Ovidæ; the Glossina morsitans, of African cattle. The Gastrophilus equi and the Hypoderma bovis are well known to every farmer. Even man does not escape. The tissues of his flesh, the mucous surfaces, the digestive organs, the coats of the eyeball, the convolutions of the brain, the lobes of the liver, and the walls of the heart, all bear testimony to this unwelcome community through contact.

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[1] Claus and Sedgwick: Zoölogy, p. 25.

[2] A. S. Packard: Outlines of Comparative Embryology, p. 28. O. Hertwig: The Cell, p. 229.

The Commensals, which Espinas[2] and others place a stage higher than the parasites, are well introduced by the five hundred species of Psenides or true gall-flies and the inquiline Cynipedæ.[3] The Eulimæ of the Echinodermata; the Palæmonidæ and the Pinnotheridæ of the oyster; the Aphidæ of ants; the Opalinidæ and other batrachian scavengers; the Isopoda in the mouths of fishes and in the nostrils of whales; the many varieties of crab that live upon the backs of sea turtles; the pilot fish that accompanies the shark; and the little burrowing owl of the prairies, are all examples of commensalism. In this form of association, the basis is neither community of interest nor similarity of species, but similarity of food. The relationship may be terminated at any time.

But unlike creatures may be mutually helpful. When a Buphaga, or pique-bœuf, digs larvæ from the backs of cattle on African plains, he becomes a benefactor while obtaining his food. The case is similar when the plover picks the teeth of the alligator, when minute organisms remove accreta and excreta from the fur of animals and the feathers of birds, and when the starling acts as scavenger among flocks in the springtime.[4] The relations of the shepherd pup to the flock with which it is reared are of the same type; and those existing between men and their pets and domestic animals also exemplify Mutualism.

The labor of obtaining food establishes a bond in the case of some animals. Among the Coleoptera, the Necrophora or burying beetles, work together.[5] Quoting Jerdon, Houssay says that the Pseudætus in hunting pigeons, goes with a mate.[1] One attacks from above, and the other from beneath the victim. When hunting hares, several ravens go together. Wild dogs hunt in packs. Wolves, vultures, and hyenas, pursue large game and rarely attack singly. Hedgehogs are social too, and seek their food in company. Gannets of the North sea unite in large numbers and annoy fishermen seriously by breaking their nets and stealing fish from their boats.[2]

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[1] Van Beneden: Animal Parasites and their Messmates; pp. 13, 55, 89. Leukart: Parasiten des Menchen, 217–336; Cobbold: Parasites, 14–269; Cambridge Nat. Hist., Vol. V, 533.

[2] Die Thierische Gesellschaft.

[3] Cambridge Natural History, p. 233.

[4] P. H. Emerson: Birds, Beasts, and Fishes of the Norfolk Broadland, p. 129.

[5] Darwin: A Naturalist's Voyage Around the World, p. 150.

The instinct that warns of common enmity or common danger results in concerted action. Sparrows station sentinels when they plunder a grain field. Crows and rooks are similarly wary. Cranes keep one member of the flock on picket duty while the others sleep and he speedily pays the penalty if guilty of any infidelity. Crows unite against hawks, kingbirds against crows, and small birds against any robber that invades the thicket at nesting-time. Tschudi in his Thierleben der Alpenwelt, says that wild horses in the Russian steppes combine against packs of wolves. Dogs band themselves against strange dogs. Mountain sheep draw together when the note of a vulture alarms their sentinels. Domestic cattle,[3] buffalo, and bisons, assemble the herd against a formidable enemy, and baboons[4] form columns to discharge missiles at an intruder. The combined sortie from the hives of bees and the nests of wasps and certain species of ants, is too familiar to be described.

The necessity for obtaining shelter from the inclemency of the season leads many creatures into association. Among the Lepidoptera, the Morpho, Brassolis, Dione Juno, and many others are gregarious in the larval stage.[5] In the winter, snakes often coil into huge knots made up of large numbers of different species. Birds frequently seek shelter and warmth in the same thicket or cave. When they gather in such a retreat, there is little affinity excepting among such as are like in kind. The effects of habitual association are apparent here. The same thing is seen among domestic cattle and flocks. When out on large ranges in summer, those reared on different farms, although keeping in sight of one another, graze in groups consisting of individuals that were bred together, seek the same shade at noonday, and sleep near together at night. It seems as though an instinctive sense of well-being, intensified by habitual association, is a potent factor for permanency in the grex, and that the tendency toward large communities increases as permanent interests become more highly specialized.

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[1] Industries of Animals, pp. 27 and 33.

[2] Emerson: *op. cit.*, p. 200.

[3] Houssay: Industries of Animals, p. 71.

[4] *Cf.* Pierquin: De la Folie des Animaux, I, p. 19.

[5] Proceedings of the Entomological Society, p. 293: Weimar, March 4, 1867.

Among animals, the breeding season probably marks the most universal example of such a specialization of interest. During this period, there is a narrowing down of companionships and a choice that throws its activities forward. The end of the daily work becomes different. Instead of being complete with the individual that is, it seeks completeness in the individual that is to be. It restricts the superficial range of the worker, but it increases the possibility of working that range thoroughly. It develops a new self in the worker because it forces him to act after the compulsion of newly realized instincts, of which the results are faithfulness toward mates, co-operation in building nests and homes, and joint effort in feeding the young.[1]

Instead of taking away the community instinct, this specialization seems to enlarge it. Ducks, teal, and pigeons flock in preference to living separately. Coots, nuthatches, titmice, chaffinches, tree-creepers, martins and wrens are social, and curlews live in large flocks. Bank swallows build in communities as though each pair were able to recognize in every other, a purpose in common with its own. The Baya or bottle-nested sparrow of Hindostan, lives in large colonies at building time. In the spots selected for a home, the date trees and acacias are covered with nests.[2] The Loxia socialis or social grosbeak of South Africa first builds a common shelter which looks like a huge grass-covered umbrella. Underneath this roof, the individual pairs build their nests. The settlement grows year by year until it sometimes numbers a thousand individuals and it is not abandoned until the increasing weight becomes too great for the supporting bough.[3]

The habits of the Loxia exhibit the phenomena of the industrial community. The viscacha affords a similar example among Patagonian rodents. It lives in companies of twenty or thirty members. When a colony becomes sufficiently large, a solitary male goes out alone and after having selected a site for another, receives the aid of two or three companions from the old home in developing it. Large numbers of prairie dogs live together. What co-operation means to them is shown by their wells. In New Mexico, where oftentimes no water appears for miles, they sometimes burrow to the depth of thirty metres in order to reach it.[4] The Russian 'souslik' lives in great colonies and multiplies so rapidly as to defeat the efforts of men to exterminate it.[1] The dwellings of termites in Guiana, New Holland, and on the American prairies, are mounds often ten or twelve feet in height.[2] The numerous families of building ants, the social wasps and the social bees, minutely described by De Geer, F. Huber, Latreille, and Lubbock, represent model animal republics. In these republics, each insect has a special part to perform. There are laborers and directors, soldiers, policemen, stewards, and nurses. Neglect of duty is punished as among the Cynocephali, which kill a faithless sentinel, or beavers, which put to death an isolated member of the family, if it attempts to return after banishment. Similarly, non-conformity to the common will, results in elephant ostracism, sparrow assemblies, crow courts, and councils in the heronries.

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[1] Rennie: Architecture of Birds, p. 29.
[2] Brehm: Thierleben—"Vogel"—II, p. 323, *et seq.*
[3] Rennie: *op. cit.*, p. 228.
[4] Brehm: Thierleben—"Saugethiere"—II, p. 294.

Migration, whatever its cause, illustrates the truth of Perrier's dictum that social life tends directly to longevity.[3] The schooling of sharks, dolphins, whales, porpoises, mackerel, herring, smelts, and especially of fishes like the Salmonidæ, which make long migrations; the wholesale abandonment of a habitat by animals like the lemming; the desertion of their nests by ants to escape infection; the general movement among antelopes, gazelles, and fallow deer toward a new pasture; the herding of reindeer and musk oxen in the North and of donkeys and wild mustangs on the Pampas, no less than the swarming of bees and locusts, and the flocking of birds, are an evidence that nothing wishes to enter the unknown without companionship. Animals and men alike desire to have the energy of others added to their own, and there is no doubt that association at such a time, means both economy of energy and increased security. Pierquin says that animals living in communities develop a higher degree of intelligence than those of solitary habit.[4]

When compared with social animals, those which live alone seem few. Certain families of wasps which build in the stalks of shrubs and brambles or burrow in the ground, lead independent lives. The Pelzbienen[5] and Erdbienen of Brehm are partially solitary, and so are certain species of Lepidoptera. Among the smaller animals, the Viverridæ and the Mustelidæ are unsocial. The larger carnivora know very little of community life. This is also generally true of Raptores. The marsh harrier, merlin, and kestrel, live retired lives. The sandpeep is so shy that little is known concerning its habits, and the jacksnipe is so naturally an anchorite that it shuns open places and only in rare instances are two found together. The cuckoo, like other robbers, has but little social magnetism to attract its feathered neighbors.[1] Night hawks have no companionship with other birds, but become attached to places; bats, peacocks, and birds of paradise, always find themselves amply occupied with their own personality. The character of the animal solitaire contrasts strongly with that of its social neighbors, and its relative infrequency, is extremely significant.

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[1] L. Figuier: The Insect World, p. 406; Quatrefages: Souvenirs d'un Naturaliste, p. 337; Michelet, p. 236.

[2] P. Kropotkin: Mutual Aid among Animals; Nineteenth Century, Nov., '90, p. 704.

[3] Colonies Animales.

[4] Colonies Animales, Vol. I, p. 195.

[5] The Xylocopæ, Osmiæ, Chalidomæ Megachilæ, and the Anthocopæ, belong to the classes named above.

Thus far, no mention of man has been made. At this stage in the scale of life, we come to a creature whose first moment of independent existence wavers between death and adjustment to the conditions of social ministration. A period follows which is marked by little of either sociability or individuality. Then play comes in to teach the nature and meaning of concerted action. According to age, strength, quickness, and inclination, natural groupings arise and these manifest themselves with almost kaleidoscopic versatility on the school playground and wherever children congregate. Then follow the imitative reorganization of the town or city, the adaptation of the political gathering, the church, the temperance legion, the various children's societies and secret organizations, and all these do something toward teaching a child that he is a part of a larger body in which his freedom for action is unlimited until he asserts his single will against the composite force which represents the will of the group of which he is a member. One of the earliest lessons of childhood. and the one most frequently reviewed throughout life is the necessity for self-adjustment.

Merely to name the manifold irradiations of the social instinct, would be to write an outline history of mankind and to fill the shelves of a generous library. Nevertheless, a few examples are necessary to bring to view certain facts that are naturally concomitant with the concept of social life.

Perhaps the civilization of any age may be fairly regarded as the ratio between its total wants and the total means of satisfying them. Whenever, in any given region, the gregarious habit has increased the collective appetite until it became too great for the natural resources of that region, the necessity of obtaining food has furnished a motive for voyages of exploration and for a change of habitat. Whenever a colony has gone out from any permanent community, it has been at first dependently associated with the parent community, and later, reciprocally related to it. Systems of water ways, networks of railroads and lines for electric traction, mazes of homely highways that leave no forest in isolation and no desert uncut, ocean cables, long distance telephones, and signal lights on tower and cloud, all offer incontrovertible assurance of the universality of human sympathy and of the unity of mankind.

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[1] Emerson: *op. cit.*, p. 165.

Only a slight bond is required to unite men by ties of common interest. A common table does it. Occupation, one's rating 'on change,' the scientific impulse, professional insight, like beliefs and sympathies, and similar ideals may determine it. A suppressed fact, a secret without consequence, a common love, a mutual hatred, or a common crime, is sufficient. *Men must be mutually interested in something.* Tribes and federations are an evidence. Military leagues like those of the Aztecs;[1] blood-sealed compacts of fraternity as among the Arabs;[2] and oath-bound pledges such as were taken by the early Germans in adopting the friendships and enmities of their ancestors, strengthen the idea of the solidarity of the clan.

The struggle for food produces pain. When the struggle is over and hunger is appeased, new sympathy has been developed and leisure is left. Under these conditions, the creative instinct of the community finds a natural expression in æsthetic and ethical activity. Village improvement associations, park commissions, and public gardens; evening schools and industrial institutes; lecture courses, art leagues, and university extension; associations of professional men; congresses of scientists; federations of clubs; Christian Endeavor societies, Missionary Boards; and every form of religious convention, from a World's Parliament to gatherings for the advancement of Zionism, represent the deepened spirit of irradiated interest.

Work of this character does not result in complacency, but in ambition. Men burn with the fever for new advantages. International visiting commissions and World Expositions result. Arts, crafts, and trades form their guilds. Trusts and transportation companies arise and find correlatives in co-operative building associations, profit-distributing stores, mutual supply companies, and 'Poor Men's Banks.' In the field of philanthropy, free dispensaries, homes for soldiers, sailors, and members of fraternities; retreats for the aged and infirm; college clubs in cities and recreation clubs in the country, exhibit the tendency of men to find their best state in a larger unity than the individual life. This principle has already found application in co-operative labor colonies,[3] of which Germany has a score, England a dozen, Ireland, Africa, and Manitoba, a quota each. Philanthropists and economists are just beginning to carry into effect the thought which led Cretan Minos to bring his people to a common table; which appeared again in the Spartan state under the sovereignty of Lycurgus; which Plato taught in the 'Republic,' More in the 'Utopia,' Bacon in the 'New Atlantis,' Campanella in his 'City of the Sun,' and Harrington in his 'Oceana.' The same humane instinct gave rise to 'Babouvisme,' to Robert Owen's 'Villages of Harmony,' the phalansteries of Fourier, the word-paintings of Bellamy and to two somewhat recent books which offer a grotesque mixture of common sense and fancy, 'News from Nowhere,' by William Morris, and Howells' 'A Traveller from Altruria.' In all these works and theories, the most significant fact is that no writer on Utopia has ever conceived it as anything else than a community life, more perfect through enlarged sympathy toleration, and privileges. And this notion is universal, for wherever individuals may locate the heaven to which they aspire, and however differently they may represent it, whether they make it a place or a condition, its common characteristic is sociality.

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[1] Letourneau: La Guerre, p. 171.

[2] Letourneau: *op. cit.*, p. 307–408.

[3] Moore: Back to the Land.

Up to this point we have moved with the resistless tide of human feeling and traced some of the most significant stages in the growth of human aspiration. But on its confines, this tide does not always come to rest in unbroken ripples. Men are not uniformly civilized. The savage and the barbarian are yet to be found in every hamlet. Rapacious acts among men still give evidence that rapacious instincts are not dead. Between the social community and the solitary life, there is a transition stage.

A. Anti-Social Groups.

Among these groups, there is still a kind of social life, but they are at cross-purposes with the ideals of the times in which they exist. Assuming that such ideals are the basis of normal social life, the ground of concerted action for the anti-social group is common hostility and common danger. Between the latest mob over labor differences or a Revolutionary Commune and the 'Hung Kea' of the Seventeenth century,[1] or the 'Society for gazing at the Moon,' there are many gradations, but the ultimate purpose is the same in all. The 'Carbonari' grew up in a charcoal burner's hut and their watchword was 'Liberty for Italy.'[2] Fenianism was the outgrowth of a similar feeling in Ireland. Such is often the beginning of a change in the character of majorities.

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[1] Eclectic Magazine, Vol. LIV, p. 662, *et seq.*

[2] Sylvio Pellico: My Prisons.

Passing from the instinct for freedom to the instinct for life, the Mafia (Bonachi, Mafiosi) of Italy, from whom the later Camorra sprang, are a type of anti-social bands of their class. The fraternity was one of cheats and robbers. Its aim was to foster crime and to protect criminals. A part of its business was to sell votes in the Courts of Assizes. Its members were distinguished by rings, neckties, manner of dressing the hair and raising the hat, form of salutation, and style of walking. No member dared to break his oath.[1] The *Main Noire* of Spain made it an ethical principle to dissemble concerning membership, to perform every duty assigned, and to suffer death for any breach of faith. The Lombardo of Sicily differed from other organizations of brigands only in name. The Artel of Russia endeavor to protect prisoners against authority. The association starts to secure freedom from legal constraint, but ends by compromising all independence of its members and becoming a swindling institution. Siberia is not large enough to hide a member who breaks his oath of initiation.

The 'Hearts of Steel' and the 'Break of Day Boys' were Irish societies for political revenge; they can be paralleled, in purpose at least, by orders of the 'Red Sealer' type in some of our cities at the present time. In the United States, thieves' trusts, fraternities and gangs, like the 'Green Cravats,' or boy thieves of Paris, show how the anti-social classes co-operate for personal advantage, and 'White Caps,' 'Moonshiners,' and artists in decoration with tar and feathers, are to be similarly classed because the purpose which brings them together does not unite them by ties of permanent interest.

A class still lower, amounting almost to parasites, is found in tramps. When followed to the far East, they find their parallel in the Thugs, Bhys, Bursoli, Kachunee, Hutlar, and Ganoo of India, who hide their murderous leisure by life in the desert. They roam in bands consisting sometimes of a dozen, sometimes of a thousand. Their idle and vagrant habits recall the 'Jukes,' described by Dugdale, the 'Tribe of Ishmael,' whose history McCulloch has recorded, and 'Une Famille du Criminels', described by Dr. Aubrey.

A kind of fellowship, also exists in the 'kaffee-klatsch,' the 'opium joint,' and the 'pretty-by-night.' It is found again in the *folie à deux*, in the suicide *à deux*, *trois*, *quatre*, *cinque*, and in the case of whole families who talk over their hard lot and determine to end it all.[2] Similar conditions may lead numbers of men to either a sudden or a deliberate decision to die. The somewhat recent suicide of a group of actresses in a banquet hall after having passed the night in festivity, like the case of the five hundred disciples of Confucius who did not wish to live after the burning of their sacred books,[1] and like that of the hundreds, who after hearing Ambraciotes discourse on the miseries of life and the glories of the hereafter, followed him in self-destruction,[2] points to the fatality of an impulse whose contagion roots in a prepared soil.

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[1] Griffith: Secrets of the Prison House, Vol. I, p. 119-120; Geo. W. Kennan, Century Magazine; C. W. Heckethorn: The Secret Societies of all Ages and Countries.

[2] See Sighele, Psych. de Sectes; Aubrey, Contagion du Meurtrir; Chpohanski, Des Analogues entre la Folie à deux et le Suicide à deux.

The cooler method of the 'Suicide Club' is still more startling. Dr. Collineau, in the Archives de Psychiatrie et d'Hypnologie, describes a Roumanian club of men who banded themselves for the purpose of closing accounts with existence in the most economical manner. Such a fact makes Stevenson's descriptions[3] more than romantic imagination. In the American Medico-Psychological Annals for 1892, there is a description of a society whose members met their end as their names appeared among the lots in an urn. Five were said to have died before the date of the writing of the article. In general, the conditions leading to membership in such clubs are hard luck, loss of freedom, loss of physical power, occasionally thanatophobia, and sometimes self-immolation, in order that the soul may advance more rapidly toward freedom.

B. Enforced Isolation.

If, as has been assumed, the highest ideals of the majority represent the normal standard of human relations, and if groups like those described in the preceding section, struggle to crush such ideals, society must protect itself. It seeks to do this by putting offenders where they will be powerless to do it injury, and penal colonies, the galleys, prison ships, reformatories, solitary prisons, and exile result.

But these are not all the forms of enforced isolation. Whenever a man engages in an occupation like diving, mining, watching flocks in the mountains or herds on the plains; whenever he enters into the manufacture of explosives, poisonous chemicals, or anything else that increases the probabilities against life or lowers its feeling-tone; whenever he crosses the threshold of an office, a factory, or a shop which has on the outside 'Positively no admittance;' and even when he is busy with plans for a venture in any direction, whether it be in a car, theater, church, or crowd, there is always a narrowing of the limits of consciousness which leaves him alone with himself.

As popularly defined, genius is a form of enforced isolation.

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[1] Aubrey: Contagion du Meurtrir, p. 162.

[2] Burton: Anatomy of Melancholy.

[3] The Suicide Club: R. L. Stevenson in The New Arabian Nights.

It represents so much of specialization that it is immutable in one direction and highly unstable in all others. It is a repellant force holding humanity at a distance. It cannot conform; it knows no planes of common interest; it has no conception of a 'consciousness of kind;' it cannot condescend to men; they cannot rise to it; necessity is the law that isolates it. The history of invention teems with records of the estrangements and the struggles of the world's benefactors. Painting, sculpture, music, much of mathematics, the real discoveries of physical and chemical science; some of our most abiding literature; and nearly all philosophy represent the ripened fruit of retirement.

Still more complete is the isolation of born defectives and of those who, through accident, have lost the functions of any of the senses. To the same class must be added those who, although born with a normal organism, have found their lot cast in an environment which, from failing to offer adequate stimuli, has permitted arrest of psychic growth long before the organism has attained its normal measure of development. Similarly, psychopathic conditions like hypochondria, hysteria, neurasthenia, melancholia, and all forms of mental alienation or physical incapacity arising from illness or failing sensibilities, as in old age, must always result in some degree of homiliotomy.

C. *Voluntary Retirement.*

In ordinary conversation, we have an easy way of speaking of voluntary isolation. Whether this kind of separation be voluntary or not, it embraces all who, engrossed by a single purpose have sought retirement as the condition best adapted for attaining that purpose. It includes the transient reveries of Socrates, the long separations of Buddha, Confucius, and Mohammed; all research and specialization from the garden bench of Democritus to the laboratory of the latest theorist on insulation; all studious disregard of custom; Stoic renunciation; contempt for physical comfort and natural desire, like that which schooled the Cynic to be content with a tub; and, no less, that attraction toward the heart of nature which finds expression in the measures of a Wordworth, or the harmonious colorings of a Turner. In a most striking manner, it has been the richest soil of theological unfoldment. Starting, perhaps, with the worship of Bacchus and Ceres or the Orphic rites; perhaps in the attempt to do homage to Osiris and Isis or to perpetuate pleasurable customs of fraternal or tribal adoption still more primitive, ascetic doctrines arose and flourished for centuries on Indian soil before Buddha received his inspiration for a new philosophy. The Zarathustrans taught the meaning of isolation to the student of great truths. It was a first principle in the training of the ἀσκηταί of Pythagoras as well as in that of the Essenic orders, which Bauer, Zeller, and Keim believe to have descended from the Pythagoreans. It meant scarcely less to the guilds of the Therapeutæ on the shores of the Dead Sea and in the valley of the Nile. It led Antony into the desert to seek the highway to holiness. It brought visions of supreme glory to Paul who, in the wilds of the Thebaid, lived his disdain of mortal ambition. Jerome and Ambrose taught it in the cloister at Nitria as Pacomius did to the Rechabites. The praises of solitude for meditation went up from the lips of Benedict among the rocks of the Subiaco and he impressed its importance upon the brethren of Monte Cassino as Bruno counselled it among the Carthusians on the heights of Chartreux and Saint Romualdo among the Camaldolese in the valley of the Apennines. The Trappist made it more efficient by long fasts and silence, and from Soligny la Trappe to the abbeys of Gethsemane, New Melleray, and Tracadie, no crystal gazer ever caught brighter visions than those which came to the monkish trance induced by the contemplation of a casket or an open grave. Out of silence and seclusion and self denial, one and all felt uplifted by the power, which, as the Carmelites thought, came to Elijah at Cherith. When Loyola became the apostle of Jesuitism, retirement and self denial were not forgotten. The Spanish Alumbrados and the Guerinets also knew the meaning of solitude and the Swedenborgian mystics had their hours for meditation.

What is the meaning of all these examples? In spite of the great mass of biological evidence for its existence, must we infer that social life is a vagary? Behind the cell-group, the animal republic, and the community of men, there exists a law, perhaps of physico-chemical attraction, which renders the concept of association inseparable from the concept of existence. This view is also supported by the etymology of the word society. Although its Latin root contains the idea of following or imitation, it also conveys the idea of sharing, or partaking with another; its Greek correlate signifies attendance and ministration; and the corresponding Sanscrit means 'a friend.'

What then shall we say of the isolated life? Does it represent a long-circuiting of natural instincts, or is it a basal instinct of the soul and the most efficient promoter of growth and of wisdom? Does it open a paradise of health and vigor to the mind, or does it tend toward a deviation from normal interests and activities, a pathological mental state, and the development of psychological sports? The root of the word solitude conveys a notion of desert waste, barrenness, and lack of physical presence, but just as strongly an idea of wholeness and well-being. The passive idea of being left alone or destitute, is quite as marked in the word as the active one of voluntary retirement.

In the word society, the idea of physical presence is somewhat evident but this is not indispensable to social feeling, the more important elements of which, are the thought of mutual contribution, consensus, companionship, and wide reciprocality of relations. Given these in any place, space is unthought of; there is no solitude; there can be none. Take away reciprocality of feeling, and no one can be so environed as not to be an anchorite in a desert of men.

II. Conditions Leading toward the Solitary Life.

If social life is the normal state of men, what are the particular physical and psychical conditions which lead them away from it? The biographies, autobiographies, and general writings of solitary characters must furnish an answer. About five hundred of these were studied in a general way, and in one hundred cases,[1] a careful summary of the leading traits of each life was made. A few typical cases are here presented in order to show the method of making the comparison which follows.

Alfieri. Of noble birth, wealthy, roving, passionate with a tendency toward dissipation. Disappointed in love; had hysterics; recovered; entered into a new intrigue in England. In Florence, avoided fair women and saw little of men; became morose; then melancholy; admitted being as much flattered by praises of his judgment in buying horses as of his skill in versification. His humor for the day is said to have been determined by the neighing of a favorite horse. (Memoirs and Works.)

Amiel. An orphan at twelve; sensitive, delicate, dreamy, mystical; at twenty, timid, discouraged, melancholy; isolated by the overthrow of the Conservatives while professor of æsthetics at the Academy of Geneva; dreamed of greatness; thirsted for it; was constantly tortured by nostalgia and the fear that he had missed his destiny. Scherer says of him, "Social ostracism prevented him from producing anything but trivialities. He was brilliant, thoughtful, experienced, but barren because of 'la maladie de l'ideal.'" (Journal.)

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[1] Æschylus, Alfieri, Amiel, Antisthenes, Antony of Egypt, Arsenius, Apollonius of Tyana, Thomas Aquinas, Bacon, Bartolomeo, Beethoven, St. Benedict, Bersot, Bolingbroke, G. Bruno, Buddha, Burns, Burton, Byron, Campanella, Carlyle, St. Catherine, Cavendish, Cervantes, Channing, Chateaubriand, Chopin, Cicero, Coleridge, Comte, Confucius, Cowper, Peter Damiani, Father Damien, Dante, Daudet, Democritus, Demosthenes, Descartes, Diderot, Emerson, Henry Fawcett, St. Francis of Asisi, Galileo, Gall, Guerin, Handel, Hawthorne, Heine, Heraclitus, Herder, Hobbes, Hume, Humboldt, Johnson, Keats, Lamb, Lander, Lamartine, Lavater, Lavoisier, Leibnitz, Lenau, Leopardi, Lucretius, Lucian, St. Margaret, Mendelssohn, Milton, Moliere, Mozart, Newton, St. Nilus, Ovid, Pascal, Petrarch, DeQuincy, Racine, "Rene the Good," Robertson, Rossini, Rousseau, George Sand, Schopenhauer, Shelley, Swedenborg, Swift, Symonds, Tasso, Thoreau, Thucydides, Turgenieff, Varro, Vico, Virgil, Weber, Blanco, White, Wordsworth, Youmans, Zimmerman, An Adolescent Solitaire, "Oberon," "Obermann," "Rene," and "De Charnay."

Arsenius. At forty, fled to the wilderness of the Thebaid; avoided the face of man; sought silence only; complained that even the reeds of Troe broke his calm by their noise.

Bacon. Sensitive, proud, ambitious, industrious, ready of wit; fawning to superiors; infatuated both with his form and his face; fond of listing the defects of his rivals; not over inclined to keep his contracts. Imprisoned in the Tower of London. (Lives by Knight and Spedding; Calendar of Great Men.)

Beethoven. Poor, proud, deaf, subjective, averse to companionship and activity; mystical, solitary, sad; cursing existence; called 'the Growling Old Bear.' (Calendar; W. Alger; Lives of Beethoven.)

Burns. Early life as "full of gloom as that of a hermit." Passionate, discontented with his lot; lacking balance; thirsting for glory; strongly social; unable to bear defeat in either physical or mental contests. In his 'Egotisms from my own Sensations,' he confesses to a habit of seeing the characteristics of great men in himself. Affected indifference from the bitterness of being scorned by men. (Works, with Memoirs; Biogs. by Currie, Lockhart, Tyler, and R. Chambers.)

Byron. Lame, sensitive, shy, proud, irritable; held men and social laws in contempt; impatient to receive praise; grudging, revengeful, self-willed, an anthropophobiac; would leap out of a window at the approach of a stranger. At Harrow, spent much time in a tomb in a churchyard. Embittered by criticism, plunged into dissipation but said in palliation, 'I did it all to make some hours of isolation less dreary.' (Alger; Harrison.)

Carlyle. Physically weak, dyspeptic, neurotic, sensitive, fretful, harsh, cynical, unhappy in his domestic life; brilliant and strong as a writer; regarded Cromwell 'mad and a quack;' had a similar opinion of Anselm, Becket, and Goethe; called Englishmen 'fools,' Americans 'bores,' and people generally, 'show and sham.'

Cavendish. Had a defect in speech; was extremely reserved and shy; often when addressed, would turn abruptly away; was accustomed to order dinner by leaving a note on a hall table for his servant; knew little of active life; nervous, irritable, retired among his books, servants thought him demented; toward the close of his life, desired to be left wholly alone that he might study the progress of his malady; is said to have been the most silent man that ever lived outside of a Trappist monastery.

Daudet. Passionately desired glory; was impatient at the cares of domestic life; maintained that marriage renders the highest intellectual attainment impossible; was as anxious to be free from the routine of social life as he was to receive the praises of men. Left his wife and home to live for months in a lighthouse off Corsica. The problem of solitude is touched in his 'Kings in Exile' and in 'Les Femmes d'Artists.'

Heine. Witty, wise, bitter, unrestrained in temper, fiendish toward rivals; personally unimpressive; scorpion-like in manner; forced men to recognize him; broken down nervously; chagrined at the failure of an uncle to provide for him; felt life lost; declared that the mental tortures of his solitude exceeded those of the Inquisition.

Herder. Solitary as a child; fond of father's approval; read in the trees and rambled much in the woods; timid, reserved, proud, physically strong; hated practical pursuits and dreaded military service; fainted in the dissecting room and gave up medicine; as a bookseller's clerk, half-starved and chafing under the pedantic spirit of Königsberg. Riga became a wilderness to him; he grew irritable and jealous, and despised social forms. In later life, cursed the solitude and gloom that surrounded his youth. (N. Am. Rev., July and Oct., 1872; The Monograph.)

Leopardi. Eagerly desired to be great; feared nothing so much as mediocrity; felt himself surrounded by men who had no interest in his work; became melancholy; said of himself, "I was condemned to waste my life in a wild village, amidst a dull race. They hated me and I fled."

Racine. At thirty, a master of dramatic composition; sensitive, proud, cut to the heart by sneers of jealous rivals; disappointed in love, lost self-respect; at thirty-seven, became a monk.

'Rene, the Good.' Studious, æsthetic, a lover of his people. Defeated in 'La Journee des Barons' at Bulgneville, in 1831; imprisoned. Hope seemed useless; melancholy followed; solitude became unendurable; roused himself to study music, painting, and the history of war. In this manner kept himself employed until his release. (Life: pp. 113-180.)

Schopenhauer. Physically weak, neurotic, eccentric; had little affinity for his mother who was absorbed with living up to 'good form.' Intolerant of the world; hungry for fame; regarded men as fawningly egotistical; gloomy and melancholy; wandered about the streets of Dresden; saw the time when he would have welcomed even those whom he had called 'toads and vipers.' Went into retirement in Frankfort. Held that solitude mitigates suffering by taking away 'the will to live.'

Swendenborg. Subjective, imaginative, sincere, never morose or gloomy; retired into complete silence in 1840; had visions from angels; all his 'heavens' divided into societies in which individuals were in accord. Never debated his position but declared that he 'knew what he wrote to be the truth of God.' Would not join a literary society because he declared himself to be affiliated with angels. (Autobiog. written for Hartley; Documents concerning the Life and Character of Swedenborg, 2 Vols., Dr. R. L. Tafel; Lillie: Modern Mystics and Modern Magic.)

Symonds. Mother died when he was four; father silent and reserved; depressed by home surroundings; a sleep walker; had delusive dreams; hated physical exertion; said that 'lack of physical strength made him solitary;' vain; enjoyed sitting for his portrait; vowed that he would become eminent but could not see how to do it; a criticism of the size of his mouth made him morbidly self-conscious and drove him away from people; at Harrow, was without associates; at Balliol, despised himself for caring so much for them; broke down in health; suffered from melancholy and suicidal thoughts. The study of Plato removed his ennui and took away his asceticism. (Autobiog. of J. A. Symonds.)

Weber. Pensive, shrinking, lacking force to endure contact with coarser natures; pondered on the miseries of existence; and withdrew from men because 'there are so many wretched souls in the world.'

Zimmerman. Weak in constitution; suffered from neurasthenia; courted admiration; exceedingly vain; always displayed his letters from Frederick the Great; loved to be leagued with the rich and powerful, but felt superior to common people; praised solitude but died mad.

An Adolescent Solitaire. Parents, scholars of note; the young man, quiet, meditative, desirous of being free from all thralls; fond of walks, brooks, birds and flowers; kept notebooks full of religious and æsthetic sentiment; was much impressed by the thought of change in nature; was constantly pleading for companionship and affection; life extremely lonely; suicided before reaching the age of twenty-one.

Types from Fiction.

"Oberon." An orphan at twelve; runs away; returns; lives solitary and sad; dreams of greatness and wishes to accomplish something but feels of no use in the world; "leaves no tracks;" "loses his steps in air;" has suicidal thoughts; expects an early death but dreads it; knows it will be oblivion, but knows that in solitary life there is the same oblivion; visits Niagara and catches an idea of power through motion; returns; interests himself in people 'to save youth from a fate like his own.' Learned to understand the emotions of the young, the gloom of the solitary, the struggles of the earnest, to think better of the world, more leniently of its faults, more generously of its failings, and found his own mind "opening into perennial blossoms." (Hawthorne: Fragments from the Journal of a Solitary Man.)

"Obermann." Always introspective, undecided, irresolute, and apathetic; can feel and think, but cannot feel and act; wishes to be a monk in the desert; regards human action as vain, practical affairs as '*miserables;*' craves sympathy yet shuns his friends; never recovers from his melancholy because he is a victim of volitional paralysis; he feels that it will do no good to try to do. (Senancour "Obermann.")

"Rene." Suffers shipwreck and lands among the Natchez in the wilds of Louisiana; takes a wife from the tribe; finds himself unused to the rough life and uninterested in it; becomes moody and melancholy; desires a great career but sees around him only a desert barren of opportunity; anxious for friends and encouragement, he hears no national song, no voice of praise; solitude preys upon him; its sounds are like the murmurings of streams in a desert, an imagery which maddens; he likens himself to one who sits on the crater of a volcano and weeps for those who dwell at its foot; in despair he cries: "J'étais seul, seul, sur la terre. Une langueur secrète s'emparait de mon corps . . . . Bientôt mon cœur ne fournit plus d'aliment à ma pensée, et je ne m'apercevais de mon existence que par un profond sentiment d'ennui . . . . Je luttai quelque temps contre mon mal avec indifference et sans avoir la ferme résolution de la vaincre . . . . Je résolus de quitter la vie."

This mood burns itself out. He sees that the savages cannot rise to the civilized life at a bound and that he must be the variable. He now becomes Re-ne indeed, finds his Indian wife kind, the tribe friendly. Sympathy awakens in him; his melancholy vanishes; he becomes a leader and dies opposing the enemies of the tribe. (Chateaubriand: "Rene." The author declares this no sketch of fancy.)

Of the hundred persons whose most striking characteristics have been illustrated in the preceding sketches, eighteen suffered from physical weakness and horror of muscular effort; seven had a physical deformity or some sense defect; seventeen were of a pronounced neurotic type; nine had hallucinations; eight were famed for visions; thirty were extremely subjective from childhood; three were reared in the cloister and six more were bred in the midst of a solitude almost as intense; sixteen suffered from aboulia, referred to as 'lack of will' or 'lack of force for work.' Too much luxury or profligate companions drove eight to the cloister; defeat of party made seven solitary; loss of friends and disappointment in love alienated fifteen. Religion led twelve into retirement; science and philosophy, eleven; several were solitary per force, since they were either imprisoned or banished. Perhaps a dozen really suffered isolation from entertaining ideas too advanced for their age.

Another ground for natural repulsion against society appears in the same records. Thirty-three were eagerly desirous of praise and full of personal vanity; forty were strongly self-assertive and self-exalting; twenty-one strove only for personal glory; thirty-three scorned men as beings inferior to themselves; four were misanthropes, and twelve could not endure criticism.

B. The Relation of Egoism to Solitary Life.

In the lower animal forms, action has no moral purpose. It arises from a blind impulse for life. When action becomes consciously performed, it becomes moral. Since conscious action, in some degree, results from a consideration of form and end, the awakening of purpose in the *unconscious*, is the birth of the moral ego.

If life were isolation, or if commerce between men were impossible, each man would be a law to himself and might dictate his relations to the natural objects within the circle of his activities. Neither self-development nor self-restraint would be necessary. Any impulse which would lead to the supplying of his needs at birth, would always suffice thereafter. Personal will would be an absolute category. But human life is not cast in such a mold. Physical association is a law of living. This fact changes the mode of living. It also changes the means, method and forms, which render the motive efficient. Equal terms in the effort for advancement, are a prime requirement in social life. Intelligence readily perceives that the struggle is not merely physical and that standards of human intercourse are mutually advantageous wherever men come together. "Reason," says Dr. P. Topinard, "causes man to vacillate between two tendencies: one of associating with his fellows for the advantage which he expects to derive; the other, of entirely dispensing with them."

The power to reason, to formulate standards for conduct, to recall the past, to consider what experiences have been advantageous and what disastrous; to bring back days of triumph and hours of defeat, and to compare self with others, tends directly to magnify the ego. And the process is beneficent so long as one keeps in mind a just estimate of his relationship to others and does not become *self-centered*.

In society, no individual can be absolute. Constant variation from the standards of personal desire is necessary. The men to whom reference was made in the preceding section, were in most cases, the victims of an exaggerated sense of self. They suffered neglect and loneliness because of their failure to understand that the highest development of a self is to be found in the most perfect adjustment of its forces to the forces of other selves around it, and that each personal will is only a molecular force contributing itself to a mass-potentiality. Such an egoism enables any individual to live in the midst of the traditions, conditions, and ideals of his environment without despising them. If he be strong, it will give him enough in common with men around him, to make contact endurable and service possible; if he be weak, it will lead him to perform his part from a feeling of common destiny.

Between a normal egoism and the extreme form which isolates, no fixed line can be drawn. One cannot give a just judgment from individual acts that come within his experience, and no party to a given course of action is more likely to be deceived as to the basal motive of it than the chief actor himself, if it chances to lie within the field of his own plans. Much that seems purely selfish to the superficial view, ultimately appears to be generously related; much that is popularly praised as benevolent and admirable at first, turns out to be incense to an ego-theos. When Dhagrit became the expounder of ascetic doctrines, he taught that the soul was to be set free by privation and hardship. Separation from society followed; then solitude, in order that the conflict might be easier through the absence of stimuli to personal desire. The desert and the cave became laboratories for the transformation of body into soul. Then rivalry sprang up. The man who could go farthest into the wilds, invent the sharpest torments for the flesh, scorn food and physical desires most disdainfully, acquired a distinction that brought ambitious followers and competitors. Hideous emulation in self-torture arose. Hindoo ascetics swung on hooks that pierced their flesh in honor of Siva; suspended themselves head downward over flames; rolled in thickets of thorns; leaped upon sharpened spikes and pierced the tongue when that member offended. Fakirs stretched their arms into painful positions and kept them there in changeless catalepsy, or clasped their hands together until the nails grew through. They exposed themselves to the bite of venomous insects as the Vanaprastha,[1] exposed themselves to hunger and cold, and fought with imaginary devils. Among the Pythagorean and Sesterian orders, rich feasts were prepared in order that, in the midst of sweet favors, appetite might be defied. Macarius thanked God for self-denial as he threw into a lake, a bunch of grapes which had been refused by every man in his Order. Saint Simon Stylites is said to have lived upon the summit of a pillar for forty years, always keeping an attitude of devotion and never desert-ing his place save when blown from it by the tempest. He is said to have bound himself upright when he became too weak to stand and to have kept long fasts in imitation of Moses and Elias. In spite of the efforts of Pacomius, he stands without a peer as an illustration of the vanity of self abasement.[1]

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[1] The Gymnosophists of the Greeks.

But there came a day when religious recluses saw that their highest service lay in ministration within the limits of the community. The old principle of self annihilation reached its saturation point. Temporal power was necessary to advance the kingdom of the spirit. The egoism which had been cloaked in the garb of humility became arrogant and found its climax of the Eleventh century in the spectacle of a monarch without a crown, standing barefoot in the snow before Canossa, suppliantly seeking absolution from the decree of Hildebrand, pronounced as boldly as four centuries later, Ximenes of Spain, said to the temporal sovereign, "Never forget that I hold your Queen every day at my feet and your God in my hands." At the present time, it scarcely seems possible that either extreme could ever have existed; but in the saner views with which we are familiar, there appears a transformation due to the consecration of egoism, which, in ethical systems, like those of the Stoics and Epicureans, Topinard declares to be the only thought achieved.

No such transformation appears in the ethics of certain schools of writing. It is the philosophy of Baudelaire that a man may rightfully live to make an idol of himself, and he declares it his greatest delight 'to produce a new shudder.' In the moral paralysis of Huysman's other self, Des Esseintes,[2] there appears a logical result of self-worship that has its parallel only in the criminal. With such men, as with the outcast, anything which brings the slightest personal distinction is anxiously sought and flamboyantly displayed. Their attitude toward society is like that of Lacenaire; "Voir expirer l'homme que vous haissez est un plaisir devin;"[3] or that of Scananella who, before his execution, swore the members of his band to kill those against whom he held grudges.

To make the self unique and striking is the study of little minds as well as of perverted ones. We regard it an innocent fad, without further significance, when a man boasts of his curios, 'limited editions,' and 'special brands.' Our vanity always keeps us 'in the swell set,' or 'among the best people in town.' If we come to grief in consequence, we know that Mithridates sacrified his head for claiming the glory of Aristoxenus at the death of Cyrus, and that the Titans were anxious to stroll in the gardens of the gods. Such a spirit expects eternity to balance what time fails to adjust. The anarchist dreams of a day when there will be no law. The beggar finds a solace in the thought that Dives must suffer while he walks through streets of gold and drinks from crystal fountains.

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[1] In this section, reference was made to J. S. Johnson's Monks before Christ; Cox's Latin and Teutonic Christianity; Kingsley's The Hermits; Tennyson's St. Simon Stylites.

[2] A. Rebours; Havelock Ellis: Affirmations.

[3] Lombroso: L'Homme Criminal, p. 161.

Men find pleasure in the cap and gown, in titles and degrees, and in the stripes and badges of great societies, even while they smile at the 'stars,' 'honor rolls' and 'rewards' of the schoolboy; they love uniforms, coats of arms, chaplets, and medals of honor, but regard the 'brave' with his war paint and his girdle of scalps as grotesque. All these emblems help one to see himself as others see him, and are marks of attainment or efficiency. It is to seem imposing that the criminal sings and jokes as the hour of execution draws near, and such are the traditions among the children of criminals that both ambition and training lead them to seek death on the scaffold.[1] It is the opinion of Sighele that every form of crime is determined by egotistical sentiment.[2] Giles[3] declares that from it arise all the evils of moral nosology. To him the egotist is one who lives on self-esteem and who never outgrows his childhood. This implies self-unconsciousness, want of humor, and lack of ethical refinement. It is a view which must gain favor with careful examination.

In Chapter I, it seemed apparent that social feeling grows out of mutual contribution, consensus, companionship, and reciprocality of relations among men. In Chapter II, Section A, from studies of the characteristics of many solitary lives it was inferred that egotistical impulses forced the majority into solitude. In Section B the reasons for social standards have been shown, together with the fact that an extreme neglect of them through following blind personal impulse, is not only anti-social but criminal. The meaning of all the data can be expressed only in approximate terms. Nevertheless it seems to warrant the statement that there are two types of character that tend toward solitude:

1. Intensely subjective; lacking physical or moral force, or both; fleeing from men and hiding from them because of feeling powerless to compete with them; yet always pining for companionship and sympathy.
2. Intensely bold; self-approving; self-assertive; irritable, and able to do battle alone, if men fail to concede and to bestow what it exacts.

It also warrants the statement that the tendency toward a life of complete isolation is:

1. Directly proportional to the intensity and uncontrolled

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[1] Dr. Paul Aubrey: Contagion du Meurtrir, p. 72.

[2] Moral Pathology, p. 62, *et seq.*

activity in the individual of the impulse to magnify or worship self.

2. Inversely proportional to the number and breadth of the interests which the individual recognizes as common to himself and society.
3. Inversely proportional to the clearness with which the individual perceives the reciprocality of his relations to society.
4. Directly proportional to the remoteness of matters of common social interest from the immediate personal desires or necessities of the individual.

III. STAGES IN THE GROWTH OF THE FEELING OF SOLITUDE.

If it were not for the fact that an extreme form of loneliness involves not only separation from society but alienation from the self, it would hardly be admissible to group under the heading of this chapter, the four divisions which follow.

A. The Feeling of Solitude in the Country.

Every man has power to feel greater possibilities in himself than he can realize in practical life. The tiller of the soil sees himself the possessor of splendid physical strength and naturally desires to put things in motion; he does not succeed according to either his strength or his desires. Whenever he sits down to survey the situation, he finds that among his early acquaintances, those who are regarded as having won distinction, are the ones who turned their backs on rural life and sought a swifter way to wealth and influence. The summer visitor comes. The dweller on the farm sees better clothing, more leisure, apparent evidences of more ready money, a greater refinement of manner, and a greater fluency in conversation than are characteristic of the locality; he also hears descriptions of the charms and advantages of other places and, when the season is over, the old life is dull and the sum total of contentment is not increased.

In the process of domesticating nature, there were elements which kept the heroic and masterful spirit alive. Now no ringing axe, no crashing forest drive, demonstrates to men their power over nature. On the contrary, need of ready money has led the agriculturist to attempt to raise crops that leave the probabilities of success against the cultivator; drought, early frosts, parasites and pests; changing tariffs and the introduction of shoddy; the replacement of horses by the bicycle, the electric car, and the automobile have brought him the feeling that he is a special object of nature's caprice and a victim of industrial laws that he is powerless to change. So the burden of debt becomes heavier, the increased use of machinery affords more time for brooding over hard fortune, and the result is lowered vitally, lack of will to work, and hostility to surroundings.

The rich possibilities of a life close to nature are but little appreciated where their meaning ought to be deepest. In any remote community, the slow speech, reluctant movements, and indifference to everything interesting in their environment, especially among young men, indicates a psychical marasmus which needs no confession of loneliness or of the desire to 'get away where there is something going on' to assure its progress.

Once the country had a full quota of social interests to minister to contentment and culture. The old time gathering at the wayside inn; the town meeting with its jests and debate, its primitive school of politics and sociology; the spelling school and the lyceum, are things of the past. Different methods of building, have banished the old-fashioned 'raising' with its communistic dinner and attendant sports, like boxing, wrestling, balancing and heavy lifting. Its dance in the barn floor, like the 'paring bee,' the 'husking,' and the 'house warming' are no longer known except in mild caricature.

A rich folk-lore also contributed to the general enjoyment and development. Rude sun myths and saws about the influence of the moon; the leaden hue of morning and the boreal light; the fancied connection between the birds and human destiny; the peculiar and almost magical character of plant and herb, did much to keep a living interest in the hearts of people and to shut out thoughts of a rural exodus like that of to-day, which has arisen partly from loss of objective interest through the intensity of subjective pain.

In Britain, according to the report of the Registrar General,[1] there has been a decline in arable land almost as startling as that exhibited by the abandoned farms in New England and in the older portions of the country generally. Among the French, Joly[2] says that the crimes of the peasants are due to solitary rumination over failing crops, destructive storms, disappointment, and monotony. Like his British and American fellows in misfortune, the French peasant breaks away from surroundings that have become torturing to him and tries to better his condition in the city. If he fails, he becomes misanthropic and robs, burns, or cheats as he is able.

The psychic principle underlying the facts in this section is that whenever, under any set of conditions, an individual fails to realize what he believes to be a due proportion between his pleasure and pain, a feeling of alienation from the self that he never loses the impulse to become, results and migration follows.

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[1] L. Courtney: Nineteenth Century, March, 1888.

[2] La France Criminelle, p. 267.

B. The Feeling Awakened in the Prison and in the Desert.

What must be the nature of the transformation in the case of any one not a hardened criminal to make him feel dead to the world? The experience of an intelligent merchant who served a five years' sentence[1] in English prisons affords an answer that is typical.

Arrest awakened foreboding. The coming of the 'Black Maria' changed foreboding to gloom. The bang of the cell door seemed like a death knell. A period of despair followed. Like Captain Moray,[2] he was 'conscious but could not think'—a creature half animal, half vegetable, that neither saw nor heard, but only lived. He had always felt a horror of dirt. When he aroused himself from his stupor the cleanness and monotony of the cell were distracting. As the hand-cuffs were clasped upon his wrists on the day of his examination, he realized for the first time the function of free movement in personal independence, and felt choked at the thought of his physical humiliation. He was sentenced to nine months of absolute solitude at Millbank. When compelled to exchange his clothing for the prison costume he felt his personal identity going. This lostness of self was greatly increased when his hair and beard were shorn, and he felt no longer human when his name gave place to a number.

At Millbank he grew morose. A kind of anthropophobia seized him, and when he was transferred to Dartmoor he found himself trying to hide among the prisoners to avoid the eyes of the crowd. When his number was changed for another at Dartmoor, he suffered a return of the feeling which beset him when he lost his name. Although he was now where he had the companionship of men during the day, he could not recover from the painful sense of isolation which attended his solitary confinement at Millbank.

Other prisoners have mentioned the slowness of the hours, the monotony of the days, the awful oppressiveness of the silence, especially at night, when it is often a relief to cry out or beat the heels against the bed or stamp upon the floor. Some have had a horror of darkness; others have found the exclusion of friends and letters the hardest thing to bear. Nearly all mention the effect of contrasting associations. To think of happier days, to feel that others are free and healthy while one is powerless and slowly dying, is to be overwhelmed by a sense of great distance from humanity.

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[1] Five Years of Penal Servitude: Anon., R. Bentley & Son..

[2] Gilbert Parker: Seats of the Mighty, p. 57.

This sense of distance, Mrs. Peary says, in her Arctic Journal, first came to her on Christmas; and Nansen, in his lectures, has mentioned it as so strongly characteristic of holidays in the North as to result in a temporary nostalgia. In describing a caravan journey from Egypt to Jerusalem by Sinai, Akabah, and the desert of Petra, Loti[1] notes the lack of stimuli for association in the desert. "No beast, bird, or insect; not even flies and gnats break the stillness: the hot white light of the sun upon the dunes is pitiless by day, and the yellow twilight is so depressing as to mingle an unutterable melancholy with the void." To him, silence, vastness, void and imperishability, are elements in a solitude that is maddening; to Father Ohrwalde,[2] the prospect of slavery, privation from society, and the thought of dying alone in the sands where the sun turns bodies into mummies, amounted to absolute isolation.

C. Child Hunger.

The best thought of the world has glorified the mother love. Convention has set no limit to its manifestations. It is honored everywhere. Its impulses are organic. If anything interferes with the normal course of a life that is richly moved by those impulses, a form of desolation results that has no parallel among the types of solitude thus far represented. The intense realism of doll play becomes serious when regarded as a kindergarten period for the highest of functions and the closest of companionships.

The 'Unlived Life of Little Mary Ellen'[3] is a story of facts that are known to many childless homes as well as to mental pathologists. In the first scene of the story a bridal party at the altar waits the coming of the groom. In the next, a woman who has not recognized any one for days, is asking the old physician why the groom came so late. It is her delusion that she was married and that her husband was called away.

In the family of her brother, a child is born and christened Mary Ellen. For a time, her aunt is delighted but the gloom returns. The deluded woman longs for a child of her own.

Christmas comes near and one day an expressman brings a golden haired doll for baby Mary Ellen but gives it to her aunt. She receives it with silent weeping, believes it a real child, fondles it, and carries it to the old physician when she is alarmed because it does not grow.

Women call her conduct 'scandalous;' men lounging at the post-office door, respectfully put on their coats when she drives up the street; and boys who rail at the curate, grow quiet when she comes near. Delegates who go from the prayer meeting to induce her to cease her motherly offices, end by helping to keep up the illusion until an accident happens to the doll-child and the devoted mother finds it dead.

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[1] Le Desert.

[2] Ten Years of Captivity in the Mahdi's Camp.

[3] R. M. Stuart: 'In Simpkinsville;' see also Haggard: 'Swallow,' Munsey's Magazine, June, 1898, p. 364-7.

The story has within it a chapter of science. It contains data for explaining the wildness of women in prison at the birth of a child within cell walls. It suggests the ground of their pity for a child that is brought into prison for an early offence, as well as the reason why threatening to deprive refractory women of their children temporarily, proves so efficacious in reformatories.

Under the stress of this consuming hunger, more children are kidnapped than are taken for a ransom. It explains cases like, those described by Griffith,[1] in which women protest that children entrusted to them for registration, are their own; like that of Mrs. Stone, who in 1815, stole a child from the arms of its mother on the street; and like that of Mrs. Magnus, whom Payn[2] describes. In the recent case of the kidnapping of Marion Clark in New York, the plea of the woman principal was that she desired a child of her own. The impulse to adopt children rests on something more fundamental to life than either charity or duty. The stealing of children where women are involved, represents this impulse gone mad. A strong proof of the correctness of the view taken in this section will be found in the fact that normal parenthood strongly favors sanity and serves to restrain mothers from suicide.[3] Futhermore, although the percentage of suicide is generally high among brain workers, women in charitable institutions, governesses, and female teachers in all grades, show a far lower degree of inclination to take their own lives than women who are not brought into contact with children.[4]

D. Time and Space.

Goss,[5] who studied hundreds of cases in the Southern prisons during the Civil War, says that infinitesimal changes in the visual field, coupled with what the soldiers imagined and feared when free movement was cut off and curiosity piqued, were what plunged them into despondency. In some vague form, the idea of space and time as objects of thought, combined with a feeling of utter subjective want, is bound to present itself, whenever one attempts to ask what the feeling of solitude really is. Dr. G. Stanley Hall's records[1] of fear of losing orientation, cosmic agoraphobia, and fear of solitude are suggestive here. A child waking for the first time in an empty room starts with a cry. He experiences a shock which returns with emphasis when, in later years, he chances to miss his way in a fog on some perfectly familiar hilltop and wanders in a circle. He has lost the customary means of marking out his relations to the objects about him because he cannot fix *their* relations. The bare peaks of the Sinaitic range, suggesting the concept of endless time and limitless space to Loti, made him wish to measure the infinite, yet they humbled him and oppressed him and filled him with eramiphobia. Pitcairn[2] says that a man deserted in the bush, thinks of his distance from civilization before he thinks of wounds or danger. In the early days of his imprisonment, Moray felt himself 'a point hung in space.' In the story of an African Farm, the thought of being poised on the summit of a pointed rock extending into the middle of the world, with 'nothing above but sky' and 'nothing below but air,' awakens the desire to pray.

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[1] *Op. cit.*, Vol. II, p. 29.

[2] James Payn: Sunny Stories and Some Shady Ones.

[3] Morselli: Suicide, p. 237-8.

[4] Morselli: Suicide, p. 248.

[5] The Soldier's Story.

All knowledge of self and things is relative. Personal orientation depends largely on objects in the visual field. In the presence of a desert, a prairie, a sea, or the sky; in an absolutely dark cavern, or on the summit of a mountain, a feeling of disproportionateness between the man and what he sees, overwhelms consciousness. Measurement is impossible; struggle useless. Paralysis of association results. Retrogression to a half-vegetative state like that of infancy follows. If the eyes be open, they do not see. They have neither fixation point nor accommodation. Their gaze is as vacant as in the early days after birth, as stolid as the frozen stare that follows death. All the life that there is, lies within. When that which has seemed real, abiding, and certain in the objective field becomes a blank, the psychic condition passes rapidly through a change whose nearest analogue is the bladder of air in a receiver from which the air is being exhausted. In the effort to expand itself to the range of its new conditions, the self finds itself only a loosely related mass of reflexes from experience, distrusts their coherence and their affinities, sees the flitting nature of consciousness, loses itself in the Unknown.

IV. THE EFFECTS OF DIFFERENT DEGREES OF SOLITUDE.

Two classes of evidence are here presented; personal testimony and records which science and history have pronounced authentic.

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[1] *American Journal of Psychology*, Vol. VIII, 2.

[2] W. D. Pitcairn: Two Years Among the Savages of North Queensland.

A. Typical Statements of Solitary Characters.

"Stupefied by doubts and fears, I led a life of gloomy despondency and might be said to vegetate rather than to live." (Alfieri.)

"It would have been joy to me to be smiled upon, loved, and cherished—to obtain what I was so ready to give—kindness and good will. . . . . All the while my heart has been full of sadness. Incapable of taking an interest in my talents for their own sake, I let everything slip as soon as the hope of being loved for them had forsaken me. I have been deliberately and systematically isolated—a hermit against my will . . . . I have not found peace in my solitude. Like cattle in a burning stable, I cling to the solitary life which does me such harm. . . . . At twenty, I was the embodiment of curiosity, elasticity, and spiritual ubiquity; at thirty-seven, I have not a will, a desire, nor a talent left. It is better that life should extend in ever widening circles, than that it should be perpetually diminished by solitary contractions. Outward radiation constitutes health; too continuous concentration upon what is within, brings us back to vacuity." (Amiel.)

"Fishes if they lie long on dry land, die; so monks who stay with men lose strength. As fishes hasten to the sea, so must we to the mountains lest we lose what is within." (Antony of Egypt.)

In his 'Praise of Knowledge,' Bacon lauds silence and solitude; in his 'Praise of Contemplation,' written three years later, he questions the benefits of solitude, and asks how one may be assured that in thought he is not adoring 'chimeras and imagination.'

"I have no friends. I must live alone with myself. My deafness forces me to live in exile. No one understands me, but whoever understands my music, will be relieved of the ills of mankind." (Beethoven.)

"They say my last writings are my best, thanks to my solitude no doubt. The prettiest flowers grow in the wildest woods." (Bersot.)

Burns, in a letter to Cunningham, describes himself as a "solitary hermit in a solitary room of a solitary inn, with a solitary bottle of wine, as grave and stupid as an owl . . . . tossed on a sea of troubles and blasted by hypochondria."

"If solitude make scant the means of life,
Society for me. Thou seeming sweet,
Be still a pleasing object in my view;
My visit still, but never my abode."
—Cowper: The Task, I, lines 233–37.

"My greatest pleasure is to go to the churchyard to say my beads and meditate on that unending happiness which so many of my spiritual children are enjoying." (Father Damien.)

"No solitude no glory, is the motto where the priesthood of intellect celebrate their mysteries." (Daudet.)

"Solitude takes one away from the distractions of activity and the miseries of society, and leads him back to a fundamental unity; but it feeds his melancholy, because it brings vividly before his eyes the mirage of universal illusion. The contemplative faculties are developed in retirement, but at the loss of intellectual vigor and energy of feeling." (Guerin.)

"I begged in vain for love and slightest alms,
But the world laughed and offered me cold hate." (Heine.)

"I am affrighted by that forlorn solitude in which I am placed by my philosophy. Every one keeps at a distance. I foresee on every side, dispute, anger, calumny, and destruction. Within, I find nothing but doubt and ignorance. . . . . I feel all my opinions loosen and fall of themselves, when not supported by others." (Hume.)

"Friendly looks and kindly actions are the only cure for sourness and misanthropy." (Robertson.)

"I care but little that I am growing old, but that I am growing old alone." (George Sand.)

"Contemplation both calms the mind and troubles it, since retirement gives a sense of infinite littleness in the self." (Scherer.)

"The jabber of men is as profitless as the yelping of a pack of hounds . . . . yet sympathy alleviates suffering." (Schopenhauer.)

"Still I am afflicted by solitude, which in my best state, was tormenting to me." (Tasso.)

"The reason of isolation is not that we love to be alone, but that we love to soar; and when we soar, the company grows thinner and thinner until there is none left." (Thoreau.)

B. Evidence from Records of Solitary Confinement.

In 1821, by an act of the State Legislature, eighty men at the Auburn prison were put into solitary cells to be 'without labor and without interruption.'[1] A year later, five were dead, one had thrown himself from a gallery, another was mad, and the rest were melancholy. Because their lives were believed to be in danger, twenty-six were pardoned and the remainder were set to work. The experiment of unbroken solitude was abandoned in 1823. In English prisons the results were even more disastrous. Of the Fenian leaders, locked up from 1865 to 1867 at Mountjoy,[2] nearly one-half died or went mad before the time of their release, and many others died soon after from broken health induced by solitary incarceration.

The general effects of imprisonment during the first few weeks are loss of appetite, loss of flesh, dejection, resentment, great irritability, and ennui, unless work is provided. Most prisoners call for it in order to kill the monotony of the days. Sleep is troubled; there are sudden starts and cries and fears of insanity. Some corner in the room assumes the shape of a spectre. It persecutes, perhaps makes plans to poison. A crushing melancholy settles upon the cell. Suicidal thoughts arise. The hypnotization of misery is complete. The least noises in the silence of the prison corridors are ominous. To Latude in the Bastile they were dying groans. In the 'Pozzi' of the Venetian Inquisition the rhythmical wash of the canal against the walls became torture. Pellico[3] had a period of seven days during which he felt himself mad and blasphemed and jeered at every one who showed a face at his window. Jane Cameron[4] had a similar experience, and rejoiced at it in maniacal song.

At Millbank Dr. Nicholson commented on the frequency of delusions of poison, spectral hallucinations and visions, in prisoners on the approach of the day of execution. Griffith[1] notes the same fact in French prisons. In their troubled sleep, Cornet, Montcharmant, Campi, and Gamahut, saw images of sharpened knives and guillotines, and their own heads rolling in the bloody sand. These records could be duplicated in the history of the Place du Chatelet, Saint Germain des Pres, the old palace of Vincennes, and the keeps of Buchsal and Baden; if more evidence were wanting it could be furnished by the Spielberg, the cells of Austria, which once men never left excepting for chapel and school, and then with masks over their faces, and perhaps by every dungeon from the time when the walls of the Temple of Karnak first began to preserve records of guilt until humanitarians pleaded for prison reform and sociologists annihilated old theories of penology.

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[1] Luckey: Life in Sing Sing, p. 10.

[2] Dr. Robt. McDonnell: Political Prisoners, p. 62.

[3] Sylvio Pellico: My Prisons.

[4] Mary Carpenter: Memoirs of Jane Cameron, p. 511.

When long term prisoners near the expiration of their sentence little joy is manifest. In movement, automatisms control. The emotions have been calloused for years. The eyes have a vacant look. They are paralyzed and blinded by the sun; the moonlight leaves things hazy and indistinct. The form is thin; the step uncertain and infirm. Outside the walls a shrinking feeling comes, and sometimes the outcast returns to the walls which have sheltered him so long, although they have proved his ruin. Like other authorities, Dr. Guilliaume of Berne says[2] that solitary confinement ruins physical and mental sanity; and a writer in the Living Age[3] affirms that ten or twelve months in a cell is sufficient to destroy all companionability.

C. *The Mutineers of the Bounty.*

The Bounty, under the command of Lieutenant Bligh, sailed from Deptford for the West Indies in 1787. The lieutenant was overbearing and unjust, and a mutiny was started by Fletcher Christian, the mate. Nine men were landed off Tahiti and abandoned. With nine Tahitan men, their wives, and one child, the mutineers drifted to the Pitcairn Islands and formed a colony. After three years, Christian became gloomy and spent much of his time in a cave. Early in the fourth year, while two of the whites were in the mountains, the natives killed five of those remaining. When the absent men returned, one threw himself from a crag, and the other, being morose and threatening, was killed by his two companions in a quarrel. One of the survivors died of fever shortly after, leaving Smith, who took the name John Adams. This man became silent and meditative. He found an old prayer book that had been brought from the Bounty, studied it, and became both patriarch and priest of the colony. He taught the Jewish ceremonies faithfully, and his colony, which now numbers about one hundred members,[1] has grown up in strict morality and commendable thrift.

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[1] Griffith: *Op. cit.*, Vol. I, p. 227, *et seq.*

[2] Proceedings of the St. Petersburg Prison Congress, Vol. V, p. 653.

[3] Volume LXXV, p. 352.

The tendency toward insanity and personal violence in the mutineers will be recalled.

D. The "Wild White Man."

In 1803, William Buckley,[2] a gigantic convict of twenty-three, escaped from Captain Collins, who was bound for a penal colony in Tasmania. In 1835 Captain John Bateman discovered, among a company of blacks near Port Philip, a tawny chief of great size, who became violently agitated at the sight of the Englishmen. He tried to address them, but could not. They gave him bread, but he could neither recall its name nor tell them his own. When Captain Bateman repeated the name suggested by the tattoo marks on the arm of the savage, he recognized it, but pronounced it with difficulty. He had lived alone until the natives found him and made him a chief on account of his great size. He had done nothing for his tribe, and was rejoiced to return to civilization. He slowly regained his native tongue, and lived out his days as a constable at Hobart Town. He was always taciturn and melancholy, and he sometimes showed signs of relapsing into the barbarous life.

The vegetative condition, the motor and sensory aphasia, the moroseness, and the general change of personality are noteworthy.

E. Le Sauvage du Var.[3]

This man was a Savoy peasant who, in travelling through Paris and other cities, discovered that men strive against each other, and decided to retire into the forest to be 'nature's child.' At the time of his retirement, he was thirty-three years old, robust, moderately educated, and fairly intelligent.

When first visited by Dr. Mesnet, he lived in a hut made of poles and covered with turf. In it, he had a store of the seeds of the maritime pine, the wild vetch, and several varieties of edible roots which he styled "la pomme de terre sauvage." He declared that he felt no greater affection for his family than for all the world. When his visitor remarked his apparent lack of affection, he replied that he loved the earth, the mother who supplied all his needs, and that he had never married because the charms of women render one weak and indisposed to work.

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[1] Lady Fletcher: The Bounty Mutineers.

[2] Chambers' Journal, Vol. XXIX, p. 177, *et seq*.

[3] Dr. E. Mesnet: Annales Medico Psychologique, July, 1865.

His ruling ambition was to make himself a coat from his own hair which he had cut each month and carefully saved for six years. When shown an account of his life in a Paris paper he manifested neither emotion nor interest, although he admitted its correctness.

He exerted himself only for his living needs. Although his every day hut was secluded, he had a better one near the highway, from which he could watch men when he chose to be nearer to them. His laws of life were: to live wholly upon vegetable food; to clothe himself from the products of his own body; and to ask nothing of men. Paraphrasing Mesnet, he had no bread, no books, no friends, and none of the comforts of civilized life; he did not enter seclusion from unhappiness, misanthropy, or religious impulsion; the compelling force was an idea. It was not realized, but he was always dreaming that it would be a little way in the future.

F. Caspar Hauser.

To what degree would the results be like those in the cases thus far cited, if children born with a normal organism and given food and light sufficient to sustain life, were deprived of the usual advantages of human intercourse? What psychic growth would be possible?

Perhaps no character ever aroused greater interest than Caspar Hauser. More than a thousand articles of varying merit have been written concerning him.[1] In the theatres of England, France, Germany, Hungary, and Austria, plays were founded on his strange story and many able men have figured in the history of his case.[2]

According to a letter which he bore when found at Nurnberg one afternoon in 1828, he was born in 1812, left on the doorstep of a Hungarian peasant's hut, adopted by him, and reared in strict seclusion.

At the time of his appearance in Nurnberg, he could walk only with difficulty. He knew no German, understood but little that was said to him, paid no heed to what went on about him, and was ignorant of social customs. When taken to a stable, he at once fell asleep on a heap of straw. In time it was learned that he had been kept in a low dark cell on the ground; that he had never seen the face of the man who brought him food, that sometimes he went to sleep after the man gave him a drink; that on awaking he found his nails cut and clean clothing on his body; and that his only playthings had been two wooden horses with red ribbons.

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[1] Antonius Von der Linde: Kasper Hauser.

[2] Among these were A. Feuerbach, the jurist; Daumer and Meyer, teachers of Hauser; Merker, the police captain; Fuhrman, the companion of his cell; Binder, the burgomaster; and Lord Stanhope, who took Hauser to his home and tried to educate him.

Of the works read by the writer, those of Daumer and Feuerbach seem the sanest, while that of Von der Linde is the most recent and the most complete. The respective titles are: Disclosures Concerning Caspar Hauser; Kaspar Hauser; Beispiel eines verbrechens am Seelenleben des Menschen; and Kaspar Hauser.

When first found, he suffered much pain from the light but he could see well at night. He could distinguish fruit from leaves on a tree and read the name on a doorplate where others could see nothing in the darkness.[1] He had no visual idea of distance and would grasp at remote objects as though they were near. He called both men and women "Bua" and all animals "Rosz." His memory span for names was marvellous. Drawing upon the pages of Von Kolb[2] and Stanhope,[3] a writer in the Living Age[4] says that he burned his hand in the first flame that he saw and that he had no fear of being struck with swords, but that the noise of a drum threw him into convulsions. He thought that pictures and statuary were alive, as were plants and trees, bits of paper, and anything that chanced to be in motion. He delighted in whistles and glittering objects but disliked the odor of paint, fabrics, and most flowers. His hearing was acute and his touch sensitive at first, but after interest in him had lessened, all his senses showed evidence of rapid deterioration. He seemed to be wanting in sex instinct and to be unable to understand the meaning of religious ceremonies. Merker, who observed him secretly during the early days which he spent in jail, declared that he was 'in all respects like a child.' Meyer, of the school at Ansbach, found him 'idle, stupid, and vain.' Dr. Osterhausen found a deviation from the normal in the shape of his legs, which made walking difficult, but Caspar never wearied of riding on horseback.

His autopsy revealed a small brain without abnormalities. It simply gave evidence of a lack of development.

G. *Feral Men.*

To speak of children who have made the struggle for life with only animals for nurses and instructors, is to recall the rearing of Cyrus in a kennel and the fabulous story of the founding of Rome. Yet Rauber has collected many cases of wild men[5] and some of them, taken as they are from municipal chronicles and guaranteed by trustworthy writers, must be accepted as authentic.

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[1] Von der Linde: Kasper Hauser, Vol. II, p. 352, *et seq*.

[2] Kaspar Hauser: seine Lebensgeschichte.

[3] Materialen zur Geschicte Kaspar Hauser.

[4] Volume CLXXVII, pp. 451-465; Volume CXIX, pp. 375-381.

[5] Homo Sapiens Ferus.

a. The Hessian Boy. Was discovered by hunters in 1341, running on all-fours with wolves; was captured and turned over to the landgrave. Was always restless, could not adapt himself to civilized life, and died untamed. The case is recorded in the Hessian Chronicles by Wilhelm Dilich. Rousseau refers to it in his Discours sur l'origine et les fondements de l'inégalité parmi les hommes.

b. The Irish Boy. Studied and described by Dr. Tulp, curator of the gymnasium at Amsterdam; features animal, body covered with hair; lived with sheep and bleated like them; stolid, unconscious of self; did not notice people; fierce, untamable, and indocible; skin thick, sense of touch blunted so that thorns and stones were unnoticed. Age about sixteen. (Rauber.)

c. The Lithuanian Boys. Three are described. The first was found with bears in 1657; face not repulsive nor beast-like; hair thick and white; skin dry and insensitive; voice, a growl; great physical strength. He was carefully instructed and learned to obey his trainer to some degree but always kept the bear habit; ate vegetable food, raw flesh, and anything not containing oils; had a habit of rolling up in secluded places and taking long naps.

The second, said to have been captured in 1669, is not so well described as the third which Dr. Connor in the History of Poland, says was found in 1694. This one learned to walk erect with difficulty but was always leaping restlessly about; he learned to eat from a table, but mastered only a few words, which he spoke in a voice harsh and inhuman. He showed great sagacity in wood life.

d. The Girl of Cranenburg. Born in 1700; lost when sixteen months old; skin dark, rough, hard; understood but little that was said to her; spoke little and stammeringly; food—roots, leaves, and milk. (Rauber.)

e. Clemens of Overdyke. This boy was brought to Count Von der Ricke's Asylum after the German struggle with Napoleon. He knew little and said little. After careful training it was gathered that his parents were dead and that a peasant had adopted him and set him to herd pigs. Little food was given him, and he learned to suck a cow and eat grass with the pigs. At Overdyke he would get down on his hands and knees and pull up vegetables with his teeth. He was of low intelligence, subject to fits of passion, and fonder of pigs than of men. (Anthropological Review, London, 1863, Vol. I, p. 21, *et seq.*)

f. Jean de Liege. Lost at five; lived in the woods for sixteen years; food—roots, plants, and wild fruit; sense of smell extraordinarily keen; could distinguish people by odor as a dog would recognize his master; restless in manner, and always trying to escape. (Rauber, *op. cit.*, p. 19, *et seq.*)

g. The Savage of Aveyron. After capture was given into the care of Dr. Itard by Abbe Sicard. Dermal sense duller than in animals; gaze wandering; language wanting and ideas few; food—raw potatoes, acorns, and fruit; would eagerly tear open a bird and eat it raw; indolent, secretive; would hide in the garden until hunger drove him to the kitchen; rolled in new snow like an animal; paid no heed to the firing of a gun, but became alert at the cracking of a nut; sometimes grew wildly angry; all his powers were then enlarged; was delighted with hills and woods, and always tried to escape after being taken to them; when angry would gnaw clothing and hurl furniture about; feared to look from a height, and Itard cured him of spasms of rage by holding his head out of a window; met all efforts to teach him with apathy, and learned but little of language. (All the Year; Vol. XVIII, p. 302, *et seq.*)

h. The Wolf Children of India. The two cases described by a writer in Chambers' Journal and by Rauber were boys of about ten years. Both ate raw food, but refused cooked food; one never spoke, smiled or laughed; both shunned human beings of both sexes, but would permit a dog to eat with them; they pined in captivity, and lived but a short time. (Chambers' Journal, Vol. LIX, p. 579, *et seq.*)

i. Peter of Hanover. Found in the woods of Hanover; food—buds, barks, roots, frogs, eggs of birds, and anything else that he could get out of doors; had a habit of wandering away in the spring; always went to bed as soon as he had his supper; was unable to walk in shoes at first, and it was long before he would tolerate a covering for his head. Although Queen Caroline furnished him a teacher, he could never learn to speak; he became docile, but remained stoical in manner; he learned to do farm work willingly unless he was compelled to do it; his sense of hearing and of smell was acute, and before changes in the weather he was sullen and irritable; he lived to be nearly seventy years old. (The Penny Magazine, Vol. II, p. 113.)

j. The Savage of Kronstadt. Of middle size, wild-eyed, deep-jawed, and thick-throated; elbows and knees thick; cuticle insensitive; unable to understand words or gestures perfectly; generally indifferent; found 1784. (Wagner: Beitragen zur philosophischen Anthropologie; Rauber, p. 49-55.)

k. The Girl of Songi. According to Rauber, this is one of the most frequently quoted of feral cases. The girl came out of the forest near Chalons in 1731. She was thought to be nine years old. She carried a club in her hand, with which she killed a dog that attacked her. She climbed trees easily, and made niches on walls and roofs, over which she ran like a squirrel. She caught fish and ate them raw; a cry served for speech. She showed an instinct for decorating herself with leaves and flowers.

She found it difficult to adapt herself to the customs of civilized life and suffered many fits of sickness. In 1747, she was put into a convent at Chalons. She learned something of the French language, of domestic science, and embroidery. She readily understood what was pointed out to her but always had certain sounds which were not understood. She claimed to have first begun to reflect after the beginning of her education. In her wild life, she thought only of her own needs. She believed that the earth and the trees produced her, and her earliest memory of shelter was of holes in the ground. (Histoire d'une jeune fille sauvage trouvée dans les bois à l'âge de dix ans; Magazine der Natur, Kunst, und Wissenschaft; Leipzig, 1756, S. 219–72; Mercure de France, Dec. 1731; Rudolphi: Grundriss der Physiologie, I, S. 25; Blumenbach: Beitrage zur Naturgeschichte, II, S. 38.)

To the cases cited, there might be added: that of the Hungarian Bear Girl, the Boys of the Pyrenees, the Wild Boy of Mt. Pindus, and others less minutely described. The present significance of all these cases becomes greater when we compare them with

The Imbecile Type. According to a consensus from the studies of Shuttleworth, Warner, Beach, Ireland, Cameron, Tuke, Seguin, Voisin, Peterson, and others concerning idiots and imbeciles, the stigmata of such a defective state are: anæsthesia of the dermal sense, dullness of hearing and sometimes of sight, inability to fix the attention, aboulia, jealousy, want of sex instinct, incapability of companionship, motor and sensory aphasias, great susceptibility to rhythm and music, and a tendency to imitate others.

Peterson,[1] quoting Wildermuth, says that in the lowest degree, idiots are purely vegetable automatons in their reactions. Sollier makes imbeciles "abusive, unstable, irritable, boastful, vicious, and extremely egotistical." Some show no sensitiveness to changes of temperature and some are torpid in winter.[2] In the Royal Albert Asylum, forty per cent. become self-supporting in useful employments. The institutions of Denmark, Germany, Norway, and Sweden, report considerably higher percentages.[3]

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[1] Frederick Peterson, M.D.: Psychology of the Idiot; Am. J. Insanity, July, '96.

[2] Jules Voisin: L'Idiotie, p. 20.

[3] The Feeble Minded: Council of the Charity Organizations of London, 1893.

From our records of long terms of solitary imprisonment without labor, we have learned that they are attended by a form of physical degeneration, a hebescence of the sensorium, a paralysis of the emotions, and a destruction of the will, which places the convict on his release, in a condition but little better than that of the imbecile. The effect of the confinement and the isolation is said to be far greater upon the prisoner who has enjoyed the advantages of culture than upon the born criminal.

The savage du Var shows such a tendency in the narrowed sphere of his daily reactions and in his want of sex instinct. His fixed idea of making a coat from his own hair gives evidence of a lack of balance that denotes an incipient insanity. His silence is probably not unlike that which marked the early stages of Buckley's gradual forgetting of his native tongue and becoming unable to pronounce the words of it save with difficulty. Caspar Hauser and the Feral cases give striking proof of the development of the senses and instincts that minister immediately to the needs of existence; they show as strongly the strenuous efforts of nature, even under the most unfavorable of conditions, to bring about a degree of physical adaptation sufficient to make life possible.

They also impress the fact that when the vital reactions have become established, they can vary only within narrow limits, during an ordinary lifetime. Of the sixteen cases of wild children, thirteen speedily succumbed to the exactions of civilized life. Only three—Hauser, Peter of Hanover, and the girl of Songi, attained any degree of culture. What gain there was, came at the cost of great disturbance to the physical organism. There was only slight psychical growth, and only two acquired the power to use language at all. The percentage of ability developed for self-support in these cases was less than one-half that developed among imbeciles.

If it be fair to make inferences concerning the solitary life from the data of this chapter, there can be no question in regard to the validity of the following:

1. When a man is left free to act according to his natural impulses, the tendency toward motor operations diminishes in proportion to his approximation to complete solitude.

2. The tendency of solitary life is to produce a vegetative condition of the organism and to cause automatic reactions.

3. The rapidity with which one in isolation falls into a vegetative condition, depends on the number and character of the associations which he has when he isolates himself and upon the purpose and feeling with which he enters into retirement.

4. Solitary confinement, when long continued, tends to de-

stroy physical and psychical health and to render companionship impossible.

5. When human beings are deprived in early years, of natural care and associates, and without aid, are forced to rely on natural instincts in the struggle for existence, life is still possible under certain conditions, but in type it is lower than that of animals and is capable of but little culture.

V. The Desire for Companionship.

Sex affinity, mutual association for the purpose of obtaining food, warmth, shelter, defence, and other similar forms of attraction, are powerful forces in bringing men together, but outside of their province there is something which, though vague, seems to have a character and function of its own in producing the same result. It is a hunger for presence and intercourse perhaps not unlike that which binds the units in a cell colony together.

It would be difficult to tell how this sense awakens. In his study of the 'Early Sense of Self,' Dr. G. Stanley Hall notes the tendency in infants to make unilateral movements and later the surprise which they manifest when hands are brought together, feet are discovered, and new contacts are thus opened for the first time.[1] Is it not possible that the first faint glimmerings of a social feeling are awakened in this manner long before the infant has realized that his complementary halves form a whole? Let it be granted that this question must wait for a positive answer; the testimony of mature men concerning the desire for companionship will serve to show how deeply rooted it is and compel acceptance.

Bernardius[2] loved to walk with Ludovico, for his conversation gave life to the crumbling Colisseum, the ruined aqueducts, and the palaces of the Roman Emperors; it brought a glory to the Carrara which butchers were using to make shelves for meat, to the sarcophagi, fallen to the function of wash-tubs, and to the temples of the gods, which had become stalls for cobblers and shops for smiths. In his Italian prison, Pellico gained new life when he could wave a handkerchief at a fellow prisoner and his spirits rose at the mere sight of a human being. He pricked his finger to write to Oroboni and declared that if his friend refused to answer in obedience to prison orders, he would still climb to his window and talk to the birds and the sky. Maroncella forgot fever and hunger, chains and darkness, guards and threats, and sang to assure Pellico that he was still alive.

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[1] *American Journal of Psychology*, Vol. IX, pp. 351-395.

[2] Ernest Eckstein: A monk of the Aventine; Tr. by Helen Hunt Jackson.

"The desire to behold some one is irresistible in the solitary prisoner."[1] So is the desire for intercourse. Between the Conciergerie and the Cours des Miracles, a haunt of thieves, there was for a long time a system of communication by means of hunting horns.[2] Dostoieffsky mentions something similar in the prisons of Russia. Dumb alphabets, secret signals, eye telegraphy, taps on the floor, beating upon walls and pipes, and hiding notes in the hair of prison dogs have been commonly employed to still the social craving, and prisoners who have learned and used these are said to have been less sullen and refractory than those who have not. Helen Zimmern[3] describes cases from Lombroso's Palimpsests from Prison Life, in which one convict advises another to feign madness in order that he may be taken to the infirmary where he 'will not be alone.' It is a reminder of the Persian Proverb, 'Death or a friend.'

A. The Pets of Solitary Characters.

Isolated people must have companionship. If men are out of reach they make mice answer. Moray had such a companion. A French fratricide tamed a field mouse, and made a mill for it to turn. The younger Crebillon shared his food with a rat while in the Bastile.[4] Alejandro, an Italian 'Jack-the-Ripper,' tamed a rat, put rings in its ears, taught it tricks, and tied it by a cord to his jacket. When he was not allowed to take it to the court room he refused food, and was silent and moody.[5] When asked why he made a pet of a rat, he replied, "Because I was so lonely." Dostoieffsky befriended a blind cur in spite of Russian superstition, and Wainwright could not bear to be separated from his cat. In a Philadelphia prison Dickens found a man keeping rabbits. Griffith[6] gives many examples of the fondness of prisoners for birds. A prisoner in Toulon taught a sparrow with the greatest patience and gentleness. The 'Sorrows of an Old Convict'[7] gives a graphic picture of the grief of an old man on a prison ship bound for New Caledonia, because an accident had killed the sparrow which had shared his cell for a year. Another unfortunate found in a blackbird, mate, audience, diviner, physician, and friend, and dedicated to it an intelligent volume written in prison. Some Russian prisoners took delight in a horse and a flock of geese that always went out in the morning with the gangs. The same men tried to tame a young eagle that they found with a broken wing, but his stubborn spirit and moping in confinement induced them to set him free. In the summer they found pleasure in making wreaths for a goat in the prison yard, and in the winter it was a diversion to smooth and align its horns. Some have tamed spiders, and others even ants and flies. As between 'Roger and his dog,[1] eating, drinking, and starving together,' make for inseparable bonds, and so beneficent is the influence of pets that stolid officials have never forbidden the keeping of birds by prisoners, even in the French Bagnes.

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[1] Sylvio Pellico: My Prisons, p. 254.
[2] Chambers' Journal, Vol. XII, p. 185.
[3] New Review, Vol. V, p. 543.
[4] Sur le Bastile, p. 4.
[5] Griffith: *op. cit.*, Vol. II, p. 275-9.
[6] Griffith: *op. cit.*, Vol. II, Chap. IX.
[7] Pierre Loti: Book of Pity and of Death, p. 15, *et seq.*

Outside of the restraint of iron bars and walls of stone people living retired lives have had a strange fondness for pets. A missionary on the Cape of Good Hope was fond of a puff adder. A literary man of note was restored from a fit of melancholy by becoming interested in a tiny lizard which hatched upon his study table.[2] Dogs and horses were the favorite pets of Dryden, Kingsley, Scott, Pope, and Byron. Cowper kept doves, goldfinches, and hares. Mrs. Browning found pleasure in doves and in her dog Flash. Hood gave Lamb a dog as a companion for his lonely walks. Collins petted white rats in his study and a blackbird in his garden. Lord Clive made a pet of a tortoise, some frogs, and a hedgehog. Berkeley delighted in a weasel, and Buckland tamed a suricate.[3] Others have kept iguanas, prairie dogs, squirrels, and brown opossums. Sometimes in the prison a struggling plant or a grass-blade has been almost worshipped. Moray saw a reflex of his own life in the sickly corn which he cultivated, and 'Picciola,' the 'Prisoner's Flower,' turned Charnay from a misanthrope into a lover of men, saved him when sick, and ransomed him from prison.[4]

B. Imaginary Companions.

"Isolated people must have companionship."[5] When human companions are wanting and pets are not available, imagination steps in to supply whatever defect there is. In his study of the 'Only Child'[6] Mr. E. W. Bohannon presents fifty cases of imaginary companionship in children. Clara Vostrovsky[7] shows how infancy sees these phantoms, hears them speak, and forgets them when busy with living friends. Names are given them. They play, talk, get angry, and run the whole gamut of passion. They are often complementary personalities. At such times they represent what the child desires to be, or become a scapegoat for his misdemeanors. Some of the records in the Worcester collection[1] nicely illustrate the great versatility of these phantom personalities.

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[1] J. T. Trowbridge: The Vagabonds.

[2] Chambers' Journal, Vol. XII, p. 173.

[3] Chambers' Journal, Vol. LIV, pp. 131 and 696, *et seq.*

[4] X. B. Saintine: Picciola.

[5] Chapter V, Section A.

[6] *Pedagogical Seminary*, Vol. V, No. 4, p. 491.

[7] Education, Vol. XV, p. 393.

During a special experiment of two weeks in the forest, in order to see what the effect of being out of sight and sound of all other human beings would be upon himself, the writer found himself, at the beginning of the second week, tracing resemblances between some of the trees and certain men with whom he had worked, and noting the increased feeling of sociability which resulted. He also found that although silent and feeling no inclination to talk during the first nine days, and although having no thought of loneliness, during the remaining days of his stay he often found himself reciting aloud, selections unrecalled for years. Is one sense a companion for another in some degree? Is the personality a more perfectly knit unity because through speech the psyche is able to hear itself think? When alone, does one unconsciously project consciousness by means of vocal utterance so that it returns to itself reinforced by a sense of otherness because of the relation between thought and audition? Something of this nature would help to explain why many adults indulge in the habit of talking to themselves, why boys whistle in the darkness to keep their courage fresh, and why children are interested in echoes. Metabolism makes the mood and the nature of the mood determines the character of the companion. Just as childhood surrounds itself with bright images of imagination, in the prison and in the insane asylum, a childhood whose joys are worn out, surrounds itself with unhappy and revengeful spirits which whisper and plot and delude it.

The echoing prayer in the desert and the muttered ritual in the mountain, assured the monk of the companionship of divine spirits and socialized the cell. Perhaps personal loneliness presents a motive for the conception of gods and for giving them objective form, as fundamental as that of Spencer, and naturally predisposing men toward animism.

C. *Production in Solitude.*

In prison, means must be extemporized. Instruction is unnecessary. Griffith says that solitary confinement is "so good an instructor that very little time is needed for teaching prisoners a trade." They go to work without squares, gravers, stamps, patterns, or models. Every scrap of glass or metal, every nail and pin turns to account as a tool. Waste from the shops, bones from the kitchen, walnut, cocoanut, and acorn shells, feathers, locks of hair, the bark of trees, pebbles, every kind of fragment affords material. Tin plates, the bowls of spoons, stone jugs, old bottles, dippers, bed posts, table tops, cell walls, and the bottoms of chairs, serve for canvas and parchment.

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[1] Child Observations in the Worcester Normal School.

a. Manual Production.

When Charnay found himself dying from ennui, he resolved that his hands should dispel his misery. From a curtain which he had been permitted to take to his cell, he picked out the threads of linen and of silk and assorted them according to color and length of fibre. He made whistles of wood, pipes of straw, men-of-war from walnut shells, and wind harps from elastic drawn from his suspenders. For a time, his handiwork gave him pleasure, but when he saw that it no longer afforded him the diversion of constructing it, he crushed it beneath his feet and turned again to work. He made baskets and chests from the seeds of stone-fruits, carved arabesques and intaglios upon his table, church pulpits, roofs of houses, fantastic designs like fishes swimming in tree tops, boats floating on towers, huge flies and chaotic hieroglyphs. Then he turned his thought to progressive scenes and symbolical designs in series, and later still, to puzzles, problems, and enigmas.

In the prisons of Belgium, men under long sentences once turned to carving in wood and stone. One prisoner constructed a clock that moved a pasteboard image which the maker delighted in calling his prisoner.[1] A Swedish convict made a harmonium with keys of bone from the kitchen table. Garath, of Toulon, built chapels and engaged in stringing rosaries. In the Bagnes of France, those unfitted for hard work, and others after working hours were over, plaited hair into chains and rings, adding bits of glass or odd pebbles for settings, as prisoners during the Civil War whiled away the hours in polishing stones and making trinkets of wood and bone. In Toulon, convicts fashioned mats and boxes from straw and made shells into cups and bones into buttons. Marie 'la Rose' who was insensible to all around her when the perfume of roses came to her, and who was committed to the Conciergerie for stealing them, made roses of colored paper, other prisoners imitated her, and thus the making of artificial flowers was suggested as an industry for female criminals.[2] Russian convicts killed straggling dogs and made their skins into boots, which were exchanged outside the prison for luxuries.

When production is impossible, motor effort allies itself with some form of abstraction. Havelock Ellis[3] gives a record from the cell of Horseley: "21,000 times I have walked around this cell in a week. 3,330 bricks in this cell. 131 black tiles, 150 red tiles in this cell.'' Jane Cameron often made the circuit of her cell 300 times at night to induce sleep. In a Russian courtyard, a prisoner used to count the posts in the fence which shut him off from humanity, omitting one for every circuit of the yard. He was interested in making this a unit for counting off the days of his sentence. Bonnivard spent his time in walking the three steps which his chain left possible and the six inch groove which he left in the stone floor, marked his heroic four years' fight for life. Domitian killed flies in prison; Gerhardi counted the facets of their eyes; Mulgrave reared chickens; Ducret measured the Alps; Galileo studied the stars from his cell window; Pellico studied German, read the bible, and committed to memory every day, a passage from Dante. Robert Emmet studied mathematics, science, and Shakespeare; Gray and Duffy practiced fencing and elocution, and Meagher busied himself with his manuscript while waiting execution for high treason.

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[1] Griffith: *op. cit.*, p. 94.

[2] Chambers' Journal, Vol. XII, p. 187, *et seq.*

[3] The Criminal, p. 174.

Prado passed his hours in reading *le fils du diable* by Feval[1] while Charles Peace preached to the wardens on the results of yielding to evil passions. Francis of France, like Jugurtha in the Mamertine, did nothing and died of melancholy. Troppman, the murderer, wrote the history of his crime. Cavaglia engraved the scenes of his guilt and his suicide, on a jug. Many others have been equally graphic. In every solitary cell that has known a captive for a long term, epigram, dialogue, praise of crime, curses against law, and cynical expressions in various languages show that motor effort at last passes into some form of abstraction.

B. Artistic Production.

In confinement, both sexes tear pictures from books and papers to paste them on the walls of their cells. It helps to make companions for their loneliness. This usually precedes artistic production. If art had not this effect and if it were not to be considered as language, the impulse to write biography in the prison would result in biography before painting. Prison art is a social occupation; its æsthetic merit is essentially low. Human figures make the greatest percentage of the designs. Men draw female figures; women, heads of men, hearts on fire, lovers before Hymenæus. In French prisons,[2] Lombroso notes the frequency of designs like two united flowers, leaves or hearts. In general the subjects differ but little from the designs that are popular in tattooing. In the old Eastern Penitentiary at

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[1] Griffith: *op. cit.*, Vol. II, p. 230.

[2] The Female Offender, p. 121-2.

Philadelphia, Dickens[1] found a man who had extracted colors from yarn and painted figures upon the walls, while a German convict had painted the whole of his cell. In rare cases, like that of Ostade, a prisoner does truly artistic work.

Sculpture and painting, according to classical types, would scarcely have been possible without isolation and those who became masters of silent expression seem to have grown incapable of any other. Andrea da Fiesole grew solitary as he grew in art. Contucci, the master of sculpture during the last half of the fifteenth century, drew in sand and modelled in clay while tending a herd. Baccio d'Agnolo rarely left his workshop, and Fra Giocondo attained his renown in architecture almost as much apart from men. Corregio was timid and anxious and worked in retirement. The same is true of Giovanni da Fiesole, Filippo Lippi, Perugino, and Leonardo da Vinci.

Giotto, Zurbaran, Sassetti, Pisano, Lombardi, Caracci, Guido, Gaddi, Vorstermann, and Girolamo de Treviso, lived and idealized the scenes of the silent life, and nearly all of the two hundred artists described in Vasari's six volumes[2] worked out some conception of solitude.

c. Literary Production.

Poetry and biography are the final avenues by which prisoners attempt to escape from their misery. The former is perhaps the more frequent because rhythm is a conserver of emotional life, but the latter represents the means by which Loti's "instinct to struggle against death" finds its best expression. Occasionally a convict aspires to pure philosophy.

In the prisons of France, Spain, and Russia, poems are very numerous. Sentiment, revenge, stoicism, melancholy, religious thought, and apostrophes to darkness are apparent in these.[3] The spirit of the dungeon breathes in the following lines in Fifteenth Century Catalanian which are quoted here from the English Illustrated Magazine.[4]

Qui no sab de sospirar
Vinga sen assi estar
Car no sol sospirara
Mas de dolor gemira
La mort y sera plus plaent
Que sofrir i tal turment
—— piger esque morir
Que joen ayxi languer.

" He who sighs hath never known,
Come within these walls of stone.

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[1] American Notes.
[2] Lives of Famous Artists.
[3] Dostoieffsky: Records of the Dead House: Prisons of Europe.
[4] Volume VII, p. 382.

Here not only shall he sigh,
He shall groan in misery.
Sweeter far were it to die
Than in torment thus to lie;
Drear is death but far more drear
Day by day to languish here."

Antonio Villa composed poetry in the Piombi. Villon's 'Two Testaments,' 'Jobelin,' and many other poems were produced in prison. Maroncella wrote thousands of verses and committed them all to memory. Pellico composed his Ester d'Engaddi, Iginia d'Asti, Tancreda, Rosilde, and his third tragedy, Leoniero da Dertona, during his long sentence.[1] Davitt,[2] De Laurent,[3] and Lombroso,[4] name many cases of prisoners who like Cellini and Paul Verlaine, or the brigands, Corani and Milano, have distinguished themselves at versification.

Mary, Queen of Scots, wrote the "Last Prayer" in a cell, and Elizabeth, like James I, of Scotland, found a solace in making verses. Davenant composed "Gondibert" while on the Isle of Wight, and Madam Roland spent nine years upon her Memoirs while awaiting execution after the fall of the Girondins.[5]

Vidocq wrote his memoirs in a dungeon, and Lacenaire and Holmes were similarly employed under the shadow of the executioner. Abaddie, another murderer, wrote a treatise on social reform.

The political prisoners, Cobbett and Leigh Hunt, continued at journalistic work throughout their incarceration.[6] Daniel O'Connell attempted a history of his life and times. To beguile his enforced leisure Sir Roger L'Estrange wrote "The History of an Imprisoned Royalist," and Sir Walter Raleigh ambitiously began his "History of the World" in the Tower of London.

Thomas Aquinas brought out a Digest of Theology and a Book of Sentences from his two years in the cell. Saint Nilus wrote the Greek Hymns to Saint Benedict while hiding from the Saracens at Monte Cassino. Paul addressed the Epistles to the Ephesians, Colossians, and Philippians from Rome.

Boethius did literary work in prison. Voltaire completed a part of the "Henriade" in the Bastile. Paradise Lost, Judas Maccabæus, and Artistry's Ideal[7] arose from the isolation of blindness. Don Quixote is a shoot of the prison, and Bunyan's pictures of hope and despair sprang alike from the gloom of the cell. Dante, Swift, Wordsworth, Spenser, Southey, Byron, Victor Hugo and Balzac, did much work in retirement. Carlyle wrote the History of the French Revolution and Sartor Resartus while apart from men, and the "Meditations" of Marcus Aurelius, and the "Confessions" of De Quincy, like "In Memoriam" and some of the strongest work of Charlotte Bronte, indicate the ripening effect of quiet hours. Kant was secluded, too, when he was at the building of his great system, and never left his study excepting to take a short walk in a retired lane. Hegel was seeking a publisher for his Phaenomenologie des Geistes on the day of the battle of Jena.

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[1] *Op. cit.*, p. 84.
[2] Leaves from a Prison Diary.
[3] Les Habitués des Prisons.
[4] L'Homme Criminel.
[5] Calendar of Great Men, p. 454.
[6] Geo. Siegerson, M. D.: Political Prisoners at Home and Abroad.
[7] Girard de Lairisse.

If we go still further into the past, tradition tells us that the first attempt at English poetry was made by a herd-boy in a cloister at Whitby, and that from Wearmonth, Beda brought out the first prose work written by an Englishman. The first printing press used in Italy was set up near the Sacro Speco of Benedict's seclusion, and the first one used in England was operated in the monastery at Westminster.[1] The Alexandrian Library was founded because sickness drove Ptolemy to Strato, by whom he was interested in study. A Benedictine established the library at Calabria, and Arizzo, a brother of the same order, is said to have founded the first school of music.

To a paleontologist, fossil prints reanimate the past. Human inscriptions, human symbols, or human traces, socialize any place. Yet like Virney[2] who, after awaking to his own loneliness in Rome, determines to make a circuit of the world if need be, in order to find a companion, the solitaire must have something to assure him of the fidelity of his own powers in an environment that is uncongenial and unnatural. So every trifle wrought in confinement; every color stain upon prison walls; every nonsense couplet; and every attempt at biography or philosophy, represents an effort of loneliness to people the waste of hours to which the physical presence of others is denied. It is an effort to multiply the spirits of one's own personality when all other avenues of intercourse are closed. These records of the prison, the cloister, and the lonely study, indicate that the desire for companionship is one of the deepest and most widely irradiated known to the consciousness of man.

In its effort to obtain satisfaction.

1. When left free to function normally, it seeks reciprocal relations with companions of the same genus and race and with similar culture and interests.

2. When relations under such conditions are impossible, it makes pets, accepting any creature that is harmless and that returns confidence for care.

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[1] Mrs. Jameson: *op. cit.*, p. 30.

[2] Mary W. Shelly: The Last Man.

3. When friends and pets are wanting, imaginary companions, come to fill the void.

4. When all the preceding means are insufficient to divert the mind; (a) Motor effort is invoked to transform mental images into objective shapes; (b) More abstract representation with the pencil and brush follows and artistic production results; (c) The still more abstract form of representing thought and life in symbols succeeds and the solitaire becomes an author.

VI. Social Life and Individuality.

A writer whose works have been much discussed during the last few years, had a habit of protesting in cases where the opinion of another coincided with his own. "Don't! When people agree with me, I always feel that I must be wrong!" When Antisthenes said this with a sneer, people called him a brute and a boor; they call his modern imitator 'original' instead of calling him mad.

This palpitating horror of consensus finds encouragement in certain sweeping statements of social psychologists. One can readily accept Le Bon's statement that the conscious life of an individual is only a trifling fraction when compared with his unconscious life, but it is not so easy to believe that one in a crowd "is no longer himself but an automaton who has ceased to be guided by his own will."[1]

Every habitual action builds something into an unconscious philosophy. Each man who does anything, absorbs something from his daily experience and endeavors to adjust it, so far as it may seem advantageous, to the sum of all that has been assimilated from the experiences of previous days. Every principle abstracted from the movements of practical life finds its most harmonious application in the sphere of the conditions which produced it; therefore, although Le Bon's assertion might be true of one who has lived in isolation, it would not be true of one who mingles daily with a throng, since the inhibitive power of earnest attention makes such a one insensible to all forms of stimulus save those which seem to offer assistance in the solution of the immediate problems with which he is engaged, or others to which these are incidental. No one hears the clicking of telegraph instruments when writing a message. The roaring of wheels and the screaming of whistles are soon lost when one reads a book or studies a manuscript or plans a business deal on a train. Crowded streets and pushing carriages awaken no fear and create no confusion in those who are accustomed to them. The man trained to the crowd is isolated from it by habit, and he is not available to it for any form of action that does not relate to some need or desire which has been previously auto-suggested in the field of his normal activity. In the crowd, then, a man is not to be feared when he is not himself but when he is most distinctly himself and reacting against the pain, of which he feels that he has had enough, in the direction of something that he feels will replace it with a fuller enjoyment. Le Bon forgets that neither a Ney, Murat, or Garabaldi; nor a Paul, Mahomet, Washington, or Lincoln, could ever move a crowd to action until he stood for something which every man in it had many times instinctively stood for to himself.

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[1] Le Bon: The Psychology of Crowds.

Every effort in the art of persuasion is in accord with the conclusion reached above. The methods of real estate men in booming city extensions; the speeches of campaign orators; the promoters of Klondike expeditions; the logic of life insurance agents; and all attempts to change the opinion of an individual or a party, aim at the reawakening of impulses to action often vaguely suggested before. When Antony made his masterful funeral oration he first asked for silence. That meant "restricted motion," perhaps the most important of Sidis's[1] principles of suggestibility. Then he awakens natural desire and gratitude. He cannot make the "affirmations" which Le Bon declares the first step toward moving a crowd, but he employs the principle of rhythm,[2] and when impulsive automatisms find a common ground in common sympathy, interest, and remembrance, the crowd, transformed into a mob, is ready for violence, and does it.

Is it true that social life produces apes, automatons, puppets and nonentities? Is it true that social exactions destroy personality? Is it true that as civilization and social institutions become more stable and laws grow more rigid individuality is crushed out?

All must admit that the exacting codes of business, like those of social life, make men seem alike in thought and manner when they meet, but although the topics of conversation are the same, the views of each two are different because varying experiences have left nothing possible but different associations. It may be granted that some people may grow to idolize mechanism, and that there is cause for essays on the vanity of "Social Screaming,"[3] but in such people and in such a diversion we have not the type of the demos. This great parent of the collective will always finds pleasure in the new thoughts, new scientific truths, and discoveries of any of her sons. The advanced thinker is no longer a foundling at the palace gate of a monarch. Pictures of Plato show Dionysius in the background; the greatness of Aristotle suffered no less from the influence of Alexander; Solon deserved immortality, but Crœsus helped men to discover it; Simonides was a debtor to the patronage of Hiero, Seneca to Nero, and Plutarch to Trajan; Augustus started Virgil on the road to immortality, and Shakespeare was fortunate in having his lot cast in an Elizabethan Age; but to-day mankind adopts the possessor of a new idea without the formality of an introduction, forgets to inspect his coat-of-arms, and neglects to ask the name of his tailor. It is not because individuality is declining that people do this, but because that, in some way, the world has risen to a larger view as to what individuality is, and has found, with Caird, that it consists in "the consciousness of self in relation to other things and beings, and in unity with them."[1]

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[1] Dr. Boris Sidis: The Psychology of of Suggestion, p. 311.

[2] Le Bon's principle of "repetition."

[3] Charles Dudley Warner.

That form of personality which is happy with social forms is only one of many personalities which, in their unity, constitute a self. Individuality is a relative quantity. Instead of destroying it, social life furnishes the only condition under which it can develop. It is a harmony essentially unique though evolved from a multitude of diverse reactions, and Chapter IV, Sections 'F' and 'G' shows what must invariably happen in *any condition* to which these are wanting.

Social life makes both for solidarity and for individuality. Rene Worms recognizes the fact when he says that "the common conditions of life make the similitude that permits solidarity, but yet, by reason of particular conditions which the separate organism knows how to combine with those of common life, it creates originality."[2] As nutrition for the cell community is possible only in the organism and through the means of it, so individual thinking must be awakened by social thinking and kept alive by it. On the surface, conformity may seem the law of social life; deep below is the province of liberty which is the most necessary condition of moral growth. That which seems conflicting in the relations of Society and Individuality, is only an illustration of Tarde's "contrary repetition." There is no conflict; each makes the other possible and both harmonize.

VII. The Need of Respite.

Many times in the foregoing pages, the necessity for developing a normal personality has appeared. The difficulty of doing it and the fear thereby awakened among many people that the race is losing psychic stamina, have also been noted. It is not amiss to ask what measures will best assist in producing a strong and coherent self. The old days of abjuring social ties, renouncing property, and retiring to the wilderness have passed away. If we could recall them, they would defeat the end in view. Yet the vacation season never fails to discover that, in this habit of retirement, there is a principle which, if rightly applied, is beneficent. Hurry and rush are the creed of the present. A little leisure, a pausing to gain orientation, a little time for the exercise of plain common sense would prove very serviceable for stringing the beads of truth gathered from experience and very significant for the development of individuality.

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[1] E. Caird: Philosophy of Kant, p. 83.

[2] Rene Worms: Organisme et Société, p. 232.

In the days of old-fashioned family devotions there was such a daily rest. Readings may have been somewhat mechanical at times and prayers may have become stereotyped, but the bare fact that they became a regular means of turning the thoughts out of their ordinary channels for a while; that they induced some degree of self-examination and helped to secure perspective between action and desire; and that, at rhythmic intervals, they recalled and impressed truths that lie deep in human nature, ought to recommend the custom on the ground of utility alone. Religious growth and æsthetic culture enhance its value. And so in any religious service, any means which arrests the eye and turns the thoughts into other channels confers its special benefits. Every fetich, Druid oak, pillar, blood stained lintel and dripping altar; every flagellum, exorcism, and charm; every bead, censer, golden candlestick and crucifix; every reredos and sacred picture; every Lupercal and Saturnalia, feast of saints and fast for sin, has acted as a wholesome check against over activity and as a conserver of the unity of human personality.

Although there are sometimes signs of consternation at periods of silence in social religious services, friends seem more familiar with the laws of thought and appreciate the value of silence when experience will not formulate itself into a message. Catholic teachers also know the value of silence in its relation to seriousness. Their preparation of children for First Communion renders the meaning of the service very impressive. During the days of "Retreat," in addition to sermons, hymns, meditations, stories, poems, and admonitions, a place is provided at home or at church, where the candidates may be alone for a time each day for rest and contemplation. The wonders of the saintly life and of the miracles are pictured. Filial obligations are impressed and disobedience is made forbidding. When it is all over, a child does not forget the cessation from work and study to take up something new. Nor does he forget more readily the symbolic and somewhat mystical features of the service. It serves to establish one permanent point of reference in the life of every child who passes through it.

For years, Saintine observed a silent time and rigidly called himself to account for the manner in which he spent each day, as Winkelmann, after visiting Italy, set aside a portion of each day for reflecting on the joys of Italian life. Something like this has been practiced with varying success in several American schools and colleges. None of these has made rules for the manner of passing the silent period beyond requiring quiet and absence of companionship. Nearly all of the students who were invited to give their opinion of the value of 'silent time' to them, and who reported, pass the hour in a devotional way.

Question blanks for 1,000 persons were sent to Mount Holyoke College, East Northfield Seminary, Mount Hermon School, and the Friends' School at Providence.[1]

Two hundred and seventy-five papers were received in answer. Nearly all were carefully and thoughtfully written, with an evident appreciation of the purpose of the questioner. The age of the writers varied between thirteen years and twenty-five years. Some had observed a silent hour for six months, some for twelve years. In many cases the hour selected was six-thirty in the morning; in the majority of cases, it was nine-thirty in the evening. Some divided the time between morning and evening. The average period spent alone was thirty minutes daily.

The occupation for the hour varied. Prayer, especially for absent friends who are missed, reading the Bible, reading books like Havergal's "Morning Thoughts," "What is Worth While," and "There is no New Sorrow;" learning Bible verses, searching until some passage is found which will make a good watchword for the day; noting the effect of each act of the day on personal well-being; learning some gem from literature, singing some hymn suited to the mood of the hour; thinking and meditating; doing nothing—simply resting and sleeping, generally cover the field.

The writers report having settled questions of religious doubt; whether God aids in one's work or not; how Christ has power over sin; whether Christ was divine; whether there is a 'Baptism of the Holy Spirit;' the problem of eternal punishment, and many personal and ethical questions concerning future plans, life occupation, duty to self and others, questions of right and wrong, categories to be observed in choosing friends, the limits and relations of friendship, how the results of a day may be made greater, whether one is a trouble to others or not, and whether it is profitable to keep a silent hour.

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[1] The writer received ready assistance from instructors of the several institutions. He wishes to thank Miss Muir of Mt. Holyoke, Miss Hall and Miss Parmenter of East Northfield, Principal Cutler of Mt. Hermon, and Prof. C. E. Cobb of the Friends' School, as well as all the contributors.

Among the benefits derived, the following are mentioned: God seems more real; calmer trust; awakened interest in the Bible which once seemed dull; banishment of anxiety; rising above worry; cure of fretting over examinations; an improved temper; help to begin the day cheerfully when rising tired and worried; keeping the harsh things unsaid; the cure of selfishness; a check upon improper language; overcoming dislike for certain acquaintances; the transformation of a restless nature into a calm purposeful one; broadened range of thought; banishment of physical pain and cure of homesickness. Some especial burdens were lightened. One mentions anxiety over plans for the coming year; anxiety over the illness of friends; the clearing away of a melancholy mood when feeling entirely deserted by friends; and one, whose father died of melancholia and who feared becoming like him, reports that every symptom and every trace of fear, have been taken away.

Others have left castle building for earnest thought, followed by action; given up dwelling on sins and failures; exchanged worrying about the future for enjoying the present; taken up systematic courses of reading; gained clearer standards of right and wrong, and learned to deliberate upon the facts of a case before pronouncing judgment.

In response to a question as to the class of people most likely to be benefited by the silent hour, the replies were: if any more than others, the melancholy, those who worry, those with most difficulties, those troubled with indigestion; students, parents, and teachers; lazy people, busy people, the work-a-day world; those whose lives are overcrowded; all who are much in contact with men; those who have most to do; people who are tempted; Christians; weak ones; those "who know it is required by rule but can't see any good in it."

All believe that it is a good thing for schools and colleges, but that it should not be compulsory, at least as a devotional hour. A few dreaded to give the time when driven with work, when they could not "get into the spirit of it," when "fatigued and too indifferent to think," and when "physical and spiritual vitality were at too low an ebb."

A few can see how, if compulsory, it might injure one who is careless and irreverent, one who is restless and evil-minded, or one gloomy and morbid by nature; and one fears that "such as had read the Bible thoroughly, might 'pick it to pieces'" if given a quiet hour for thought.

One of the most noteworthy features of the records is that the writers have experienced no especially exalted states of feeling. This indicates a sane and wholesome view of the matter, and a deep natural growth without jerkiness or reduplication. These young people have not, like Dr. Adler, formulated a principle that "the moral man must consider his words and actions," that "he must inhibit, and, therefore, he must have intervals of silence,"[1] but they have been building it into personality, which is more important to each one concerned.

Perfect health demands a perfect metabolism. Without doubt the function of rest in securing such a condition is far greater than the slight attention given to securing rest would indicate. A daily period of quiet thought for every motor-minded person, and of quiet rest for every person who is mentally or physically overworked, would serve to make vacations tolerable, to cultivate an acquaintance with self, and to give a stronger tone to society. Such a period need not necessarily be devoted to prayer and praise alone. In the turning of the thoughts into any wholesome channel the advantage is derived, but whenever an hour comes in which any person finds his "physical and spiritual vitality too low" for meditation, quiet sleep is the incense of devotion.

For a different temperament, one which is extremely subjective, and hates affairs, which, like that of Raphael,[2] Rene and Obermann,[3] always preys upon itself, dreams without acting, desires to be of service but never can will to serve, a quiet hour might prove baneful. Such a nature needs the stimulus of constant contact with men, a brad instead of quiet and a cushion. To develop personal strength and balance is the end for which both rest and effort are sought. In general, unless one is engaged upon some special theme of research, brief periods of partial retirement, might profitably be alternated with longer periods of contact with men and society. Sighele,[4] quoting Tarde, says that Solitude can be fruitful in no other way.

VIII. Specialization.

A method of life like that suggested in the preceding chapter, mingling abundant activity with due reflection, represents the initial form of specialization. If made broader in character, it could not fail to lead to the discovery of certain interests, deeper and more permanent than others, in the nature of each individual. The development of these fundamental lines would endow the majority of men with greater personal power and would prove a propaedeutic to more earnest and devoted investigation on the part of a few.

The wide difference between one's power for seeing and that for doing, makes such a method necessary if one wishes to make the most of life instead of existing to be amused. A man measures his visual field in square miles. That field may be regarded as a composite thing made up of many interrelated areas. He spans his physical ability to work these areas by paces or by the odds between his chin and his finger tips. And the total effect of the dynamic expenditure of a lifetime, depends on whether the principles of interrelation in the field of work are discovered and made the law governing the application of force, or whether they are permitted to lie hidden while force is applied at random. In the recognition of this truth, we have the reason why we count the contributors of special ideas by tens, while we summarize our census of humanity in hundreds of millions.

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[1] Felix Adler: International Journal of Ethics, Vol. VIII, p. 358.

[2] See Works of Lamartine.

[3] Chapter II.

[4] Psychologie de Sectes, p. 61.

One of the needs of the century is a kind of wisdom which the odds and ends of its experience could yield if they were rightly formulated. But the gold of truth lies deep under the waste of error, and an elimination of the useless, a conservation of the desirable, and a constant reconstruction of current opinions are necessary to right social and practical ideals. Gossip must not masquerade as conversation; frantic efforts to kill time must not pass for recreation; and the belief that mere social assemblies and half-hour cram classes will produce wrinkles that cannot be distinguished from those on the brow of wisdom, must be shown to be a myth. Deeper views are our need but they can be attained only by working more intensely and more intensively. One who undertakes to do this will not be a pioneer. Pliny employed a reader while he ate his meals. Alexander broke the tension of his campaigns and gained new energy for prosecuting them by studying a favorite theme on the eve of the battle of Pharsalus. Brindley, the engineer, went to bed to work out his special problems and remained there until they were solved. Turner used to sit for days on crags and hillsides. Sometimes he dreamed; sometimes threw pebbles into the lakes below. Rivals ridiculed him for wasting time but his brush surpassed them all. Emerson says of Archimedes and Newton, "If these had been good fellows, fond of clubs and port, we should have had no 'Principia' and no 'Theory of Space.'"[1]

What specialization means in a practical way cannot be estimated, but faint suggestions of its meaning can be gathered from the growth of any science, art, industry, or profession. The development of physiological medicine will afford a striking illustration, although only a few steps can be traced here. Ignorance, superstition, and theology were long the chief foes to its advancement as a science. Bourke's volume on the use of ordure in curing disease is a sufficient commentary on the naivete of early folk-thought and John Wesley's 'Primitive Medicine,'[1] shows only a refinement of the primitive simplicity.

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[1] Society and Solitude, p. 12.

It was 1315 when Mendini began to lecture on anatomy and Arabian Therapeutics at Bologna. For many years, only clergymen were allowed to give instruction in medicine, and up to the Fifteenth Century, all the anatomical demonstration that entered into a full preparatory course was made "by a barber's assistant with a razor."[2] After the awakening came, discoveries multiplied. Laennec with the stethoscope gave an impulse to physical diagnosis; Bright, Hope, and Bonillard, added something to existing knowledge of heart affections; Hunter, Bischat, and Müller gained distinction in anatomy and physiology. Under the influence of Bacon, empirical study was reanimated. The researches and comparative studies of Buffon, Linnæus, and Cuvier contributed especially to this field, although leading to provinces far wider. The work of Broca, Ferrier, Hughlings-Jackson, Flechsig, Kraepelin, and Nissl; the patient labors of Virchow, Davaine, Bouchard, and Pasteur on the germ theory of disease and immunity through inoculation; the advanced researches of Behring and Roux, Kitasato, and Yersin have not only built a wonderful science, but have opened new realms of psychic activity, and given men additional days in which to employ it.

The influence of other sciences cannot be omitted. The chemical mile-posts set up by Dalton, Wollaston, Berzelius, Misterlich, and Dumas; the prophetic discoveries of Herschel and Fraunhofer; the labors of Newton, Fresnel, Malus, and Thomas Young, which paved the way for the investigations of Brewster, Arago, Helmholz, and Roentgen concerning the nature and uses of light, will never cease to be memorable.

Starting with little education, but with great talent for business and a peculiar power of prophetic vision, a few men who have amassed fortunes, have so realized the need of the world as to make large bequests for the furtherance of special research, and the results which are being accomplished reveal more and more the wisdom and the true humanity of such benefactors. The example of such is destined to be followed more and more, though perhaps in the less inclusive way of building laboratories and experiment stations for the solution of limited or very definite problems. Of course, the mass of humanity cannot be limited specialists but in tracing the stages of the growth of an idea, the spirit of the conditions which attended its unfolding, revives in the imagination of every one who is earnest enough for intensive study, and while it gives an added sense of personality, it convinces of sonship in the world.

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[1] Revised by W. M. Cornell, M. D.; Twenty-fourth Edition, Boston, 1858.

[2] Horsley: The Brain and Spinal Cord, p. 15.

IX. Summary and Educational Suggestions.

Each of the foregoing chapters closed with its own summary. In order that the unity of all may appear more complete, their spirit is formulated in the following inferences:—

1. Social life is the normal condition of human development and the normal sphere of human activity;
   a. Because such is the evidence of biology;
   b. Because it is the testimony of solitary characters;
   c. Because it is supported by the pathetic efforts of men in solitary confinement to obtain companionship;
   d. Because the 'Feral' cases show that psychic development is impossible out of society, and that neither language nor companionability are possible to any considerable degree, where human beings are deprived of natural associations until the age of nine.
2. Far from conflicting with the growth of individuality, social life is the only condition under the favoring influences of which it can be evolved.
3. The popular opinion that social life destroys individuality arises from a low conception of individuality and a lack of realization of what society implies.
4. The cause of complete isolation is, in general, an egoism so extreme that it amounts to self-worship; it may be due either to the fault or the misfortune of the solitaire.
5. One of the problems of the present is to realize a higher egoism which shall find its ideal in reciprocality of social relations.
6. Although complete solitude is unfavorable to men, respite, vacations, short seasons of retirement, are necessary in all lines of life.
7. In the "Retreat," in the "Silent Time," of certain educational institutions, and in the "Quiet Hour" of the Christian Endeavor Society there is a principle which tends toward the orientation of the self, personal strength, and general balance, and which finds its fullest play in specialization.

There are some things that it is particularly important for educators to remember. Among these—

1. That a solitary child is an abnormal being in danger of suffering from arrest of normal development. Especial care must be taken to win the confidence of such a one and to remove the conditions tending in the unfavorable direction.

2. That the tendency toward solitude at adolescence indicates not fullness but want. Plenty of work, sufficient freedom, time for rest, opportunity for hearing and seeing the widest possible range of beautiful things, some intensive work in favorite lines, and, above all, the genuine sympathy and wise companionship of some friend with broad experience, will serve both to banish loneliness and to awaken earnest purpose.

3. In Reformatories for youth, isolation for misbehavior is opposed to the purpose of such institutions. Life saturates the outcast with loneliness. His treatment at the hands of society should be such as to socialize him. The danger in isolating him arises less from his tendency to practice evil habits than from his danger of growing more sullen and of developing intenser hostility toward society.

4. That popular judgment errs in asserting that mass instruction necessarily kills individuality in the pupil. The evil, when it appears, can be traced to a worship of mechanical method, or to the equally mechanical exactions of Systems, Boards, and Superintendents.

5. That as soon as the sub-conscious life out of which all spontaneity and enthusiasm arise, becomes calloused, instruction is dead; therefore, no one needs contact with warm social life and new ideals more than the teacher. At present, however, an insufficient force of teachers and an excessive amount of profitless detail debars him both from special study and from society.

6. That nature study and æsthetic culture ought to be more strongly emphasized in rural schools.

7. That the dignity and importance of every form of labor ought to be impressed more fully in all schools.

8. That the pupil ought to be taught to make friends with himself and to appreciate a true sociability.

HEALTH INSPECTION IN THE SCHOOLS

By Wm. H. Burnham.

Several facts urge the problem of health inspection in the schools for immediate solution. First, both statistics and observation show the great prevalence of contagious diseases among school-children, and the almost unrivalled opportunity offered by the school for detecting and checking such diseases. Second, many investigations since the classic studies by Hertel in the schools of Denmark, and by Key in Sweden, have shown the large percentage of school-children suffering from chronic diseases of various kinds.[1] How far the home is responsible for these diseases and to what extent they are aggravated by the conditions of school life is unessential. The fact remains, be the cause what it may, that a very large percentage of the children in the schools are chronically ill. Third, the studies of the sanitary condition of schoolhouses made in many cities in Europe, and in this country in Boston, Philadelphia, Buffalo, and several other cities, show the existence of some schoolhouses that defy almost all the well-accepted principles of hygiene, and whose use for the purposes of instruction is a disgrace to civilized communities; and they indicate that however good the best schoolhouses in this country may be, a large part of them are unfit for use because of their unsanitary condition. These investigations have been made usually under the direction of competent experts. Among the evils found are insufficient light, lack of ventilation, air vitiated by odors from out-houses, old style vaults, gases from the heating apparatus, etc., wraps and umbrellas kept in the schoolrooms, old style furniture too large or too small for the children, seats placed at a plus distance, the arrangement such that the light comes from the right, practically no attempt at cleaning the rooms, dry sweeping, the use of a feather duster to stir up the dust, dirty text-books, etc. These facts can be verified by observation. Similar evils exists in every large city. The need for a competent system of health inspection is emphasized still further by the fact that in the modern reconstruction of school instruction special regard for hygiene is demanded. It is now seen that every educational principle and method, the choice and sequence of studies in the curriculum, and all the details concerning text-books, apparatus, and the like, must be studied from the point of view of hygiene, and that the prime principle to be considered in all educational matters is that of regard for normal healthy development of the individual child.

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[1] For statistics see Hertel, Overpressure in the High Schools of Denmark, London, 1885; Burgerstein, Axel Key's Schulhygienische Untersuchungen, Hamburg, 1889; and the article by the writer on School Diseases, in the Universal Cyclopædia, Vol. X.

Not only do experts in hygiene and educators now demand a greater regard for health in the schools, but the community is dissatisfied with the present condition of the schools, and one great cause of this dissatisfaction is the knowledge that the conditions of school-life are often injurious to health. Citizens, as a rule, have little knowledge of the actual conditions of the school, and frequently still less appreciation of the demands of school hygiene; nevertheless, whenever the facts are forced upon their attention, whether by wholesale investigation or by the reports of their own children, they are aroused, and dissatisfaction with the schools is frequently the result. Intelligent citizens object to a law that requires children to attend school when so often the conditions are such that a child cannot stay in the schoolroom without grave danger to health.

The recent discussions of health inspection have centered around the plan of special systematic medical inspection by regular physicians. The interest in the question is indicated by the number of articles that have recently appeared upon the subject. In Germany especially, the matter is repeatedly brought to public attention by discussions in journals devoted to hygiene. In the *Zeitschrift für Schulgesundheitspflege* alone, during the last two years (1898, 1899), a dozen articles and reports have appeared upon the subject besides numerous minor contributions. The merits of the plan can be best discussed after a brief survey of the history and present status of the subject.

EXPERIMENTS WITH MEDICAL INSPECTION.

According to Dr. Cohn,[1] the Silesian Medical Society was the first in the world to consider the subject of school hygiene. Thirty-three years ago he made his classic report upon myopia among ten thousand school-children in Breslau; as a result a commission composed of physicians and teachers was chosen by this society. This commission worked for the improvement of schoolrooms, but did not advocate the appointment of school physicians. Medical inspection was advocated, however, by Falk in 1868, and Virchow in 1869, and by Ellinger in 1877;

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[1] Cohn, Dr. Hermann: "Die Schularztfrage in Breslau," Zeitschrift für Schulgesundheitspflege, 1898, No. 11, pp. 579-596.

by the last mentioned physician the term school physician was invented. Other physicians and commissions discussed the subject, and especially noteworthy was the papér on the necessity of school physicians by Dr. Cohn, published in 1886, and the address given by him before the International Congress of Hygiene, in Geneva, in 1883. At this Congress Dr. Cohn presented a series of eighteen theses which represent the fundamental features of the plan for school physicians to-day. Among these are the following:

A thorough municipal hygienic inspection of all the public and private school buildings now in use is absolutely necessary. The school may be injurious to health, hence every school should have a school physician. The school physician should have a seat and vote in the school board. Never more than a thousand pupils should be allotted to one physician. At the beginning of each semester all the children should be measured, and seated according to their height. The school physician must test the eyes of each pupil annually. He has the right to visit every class, and at least once a month he must visit all class rooms during the instruction. Every contagious disease must be reported to him and he must not permit the child recovering from such disease to return to school until he is convinced that all danger is over and that the books and clothes of the child have been thoroughly disinfected.

Medical supervision has been advocated for many years in other countries; and it has been tried in one form or another in France, Belgium, Austria, Hungary, England, Sweden, Norway, Switzerland in many cantons, Russia, Japan, Germany, especially in Saxony, and in the cities of Leipzig, Karlsruhe, Dresden, Wiesbaden, Darmstadt, Berlin, etc.; and in Boston, New York, Chicago, Philadelphia, and some other American cities, and to some extent in several other countries.[1]

The duties of a school physician, as they are prescribed by law in some of the European countries, illustrate the scope of the plan. Take for example the law in Hungary. The school physician is required to investigate the school buildings, and surroundings, the floors, doors, windows, stairways, corridors, playgrounds and the like. He tests further the air, the drinking-water, has charge of disinfecting the school when necessary, and so on. When the children enter the school, he tests their health,—giving a physical examination, noting the condition of the heart and lungs, any tendency to spinal curvature, any symptoms of contagious diseases, nerve signs, etc. He tests the eyes and ears, and examines the teeth, hair, skin, etc. Further, when the physician has reason to suspect that the pupils live in unhealthy homes, or are not properly fed, he causes the director of the school to look after the parents or guardians in this respect. He has supervision of the plays and sports of the pupils, baths and swimming-tanks, and so on; and he reports each year to the director in regard to the hygienic condition of the pupils.

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[1] For brief historical surveys of the subject see Mangenot: L'inspection hygiénique et médicale des écoles, Paris, 1887, pp. 64; and Schubert: "Zur Schularztfrage," Z. f. Schulges., No. 6, pp. 305–317, and No. 7, pp. 379–391.

The plan of medical inspection in France deserves special notice.[1] Since the law of 1893 in regard to medical treatment of the poor, all the public educational institutions of France have had medical inspection. The private schools, although provided for in the law of 1886, have not been subject to such inspection. Mangenot[1] writing in 1896, says that both in Paris, and in the provinces, there is no medical inspection of private schools. In Paris provision is made for systematic inpection of the schools under the direction of a general school inspector, and annually, at the close of the school year, a comprehensive report of the health conditions in the city of Paris is presented to the prefect. Some of the articles of the law in regard to medical inspection are as follows:

Article 2. The public schools of the city of Paris are, for the purpose of medical supervision, to be divided into groups of from 15 to 20 schoolrooms. Any maternal school is to be reckoned as two rooms. A redistricting takes place every three years. The prefect performs this duty. Newly opened schools are assigned to the nearest "medical group."

Article 3. The salary of a school physician is 800 francs ($160) per annum.

Article 4. The physicians are nominated by the mayors and appointed by the prefect of the department.

Article 5. The tenure of office of these physicians is for three years.

Article 10. The school physician is obliged to visit every public and maternal school twice a month, but he must also appear there when the mayor or prefect may see fit to order a visit.

Article 13. At least once a month a thorough examination of each child is to be made with reference to eyes, ears, and teeth. If the physician finds a tendency to disease, or if the general state of health of the child needs special attention on the part of the parents, these must be notified by the physician's certificate, which is to be handed to the child.[2]

In Switzerland the matter of health inspection is left to the different cantons. The scope of the work done by the physicians in the cities having the best inspection may be judged from the duties of the school physician in Basel. They include the following functions: He devotes the greater part of his time to visiting the schools. He notices the heating, lighting, and ventilation, the position of the pupils, and tests their eyesight and hearing. These tests often give occasion for home visits. He makes reports of his observations on the condition of schoolhouses to the officials, recommending changes. He must concern himself with the remission of subjects on account of illness; and must see that parents observe the regulations in regard to infectious diseases. Further, on him depend largely the choice of pupils to receive free food, of those to be placed in the special classes for backward children, and of those to be sent on vacations. For example, one year 19 boys and 25 girls were chosen by the teachers for the dullards classes. Of these the school physician picked out 16 boys and 23 girls. As a concrete example of work that may fall to his lot, the physician in Basel, when the introduction of school baths was under consideration, was sent to Karlsruhe to test the bathing arrangements there and to report thereon.[1]

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[1] See Z. f. Schulges., 1896, pp. 643–646.

[2] Report of the Commissioner of Education, 1897–1898, Vol. II, p. 1510.

The Medical Society of the Canton of Zurich recently expressed the wish that the following paragraph be inserted in the new school law for the Canton: "Periodical investigations should be made by physicians of the health condition of the school children and the sanitary conditions of the schools." The duties of the physicians, according to the wish of the medical society, would be as follows: First, all the children on entering school, even in the higher classes, should be examined in the course of the first school year; second, the investigations should cover at least the following points: height, weight, eyes, acuity of vision, ears, acuteness of hearing, mouth, teeth, nose, breathing and disturbances of speech, stammering and stuttering, whether vaccinated, or revaccinated, whether they have had the smallpox, general health condition, physical and mental; third, the investigations should take place periodically, and at least at the beginning, in the middle and at the end of the all-day school, and, wherever possible, should be extended to the secondary schools; the teachers should be specially advised to make still more frequent tests of sight and hearing; fourth, the physician further should inform himself several times in the year in regard to the sanitary conditions of the schoolhouse and its equipment; fifth, every child should have a health card attached to his diploma; sixth, furthermore, a report of the results of the tests in regard to the physical condition of the children is to be prepared by classes and years by the physician and the teacher in the card or check-book form, and this is to be sent after the completion of all the tests with a short comprehensive report with regard to the health conditions of the school in general to the school board; seventh, in case of emergency, specially in case of infectious diseases among the children, the physician shall immediately report to the board; eighth, the report is brought first to the knowledge of the parish school directors, and then to the district school directors, and through them submitted to the district physician, who finally gives the necessary instructions to the local board of health; ninth, the assignment of these investigations to the physicians is an affair of the school authorities; tenth, the physicians shall be paid for their work by the State.[1]

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[1] Z. f. Schulges., 1892, p. 273.

In Germany, in the different provinces and cities that have medical inspection the regulations vary. As the plan adopted at Wiesbaden is taken as the model in Germany, and recommended by the Cultus-minister for general adoption, it is worth while to cite in detail the regulations of this city concerning the duties and position of the school physician.

CIRCULAR A.

Regulation for the School Physicians in the City Elementary and Middle Schools, Wiesbaden.

The duty of the school physicians is to have oversight of the health condition of the pupils allotted to them, and to co-operate in the medical inspection of the premises and equipment of the school, and accordingly they are required to carry out all the regulations of the authorities in regard to this duty.

The following are the special regulations: I. The school physicians shall investigate carefully the physical condition and health of the pupils who newly enter the school, in order to determine whether they need permanent medical supervision, or special consideration in the instruction of the school; (for example, dismissal from instruction in certain subjects, as gymnastics, singing, or limitation of their share of the instruction, allotment of especial seat on account of defects of eyesight or hearing.) A health card is to be filled out for every child tested, and this is to be kept with him during his whole school period. If the child appears to be in constant need of medical supervision, the words "medical control" are to be written on one side of this card, and report is to be made at the initial investigation of each child under the categories of good, medium, or bad. The discrimination *good* is only for completely faultless health condition; *bad* only for pronounced tendency to diseases or marked illness. The other rubrics are to be filled out only in case of need, indeed in case of illness, when it becomes noticeable at the initial investigation or in course of the later school year. The weighing and measuring is to be undertaken by the class teachers, and recorded every half year on the cards, approximately in half cm. and quarter kg. The chest circumference is measured by the physicians, but only in case of children where disease of the lungs is suspected.

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[1] See Z. f. Schulges, No. 4, 1899, pp. 221–2; also No. 1, 1900, p. 56.

II. Every fourteen days, or oftener in case of contagious diseases, on a day previously decided upon by consultation with the school director (for example, the first and third Thursdays of the month), the school physician holds consultation hours in the school in the forenoon from ten until twelve o'clock. For this purpose, when it is possible, a special room is to be placed at the disposal of the physician. If the physician desires to visit the school on some other day than the one appointed, he must notify the school director of this at least three days before.

In case of unforeseen hindrances, the following Wednesday should be the visiting day. The first half of the consultation hour should serve the purpose of a visit of from ten to fifteen minutes to five class rooms during the instruction. Every class room, when possible, should be visited twice each half year. At these visits all the children are to be subjected to an external inspection; and if, in special cases demanding immediate consideration, information is desired by the teacher, this information is to be given him.

If individual children appear to need a more careful investigation, this is to be given afterwards in the physician's consultation room. At the same time these visits will serve for inspection of the school localities and their arrangements, and for the control of the ventilation, heating, physical position of the pupils, etc.

For pedagogical reasons, the physician will be expected to avoid in a tactful manner, every humiliation or exposure of the teacher before his class. The second half of the consultation hour is to be devoted to any more careful investigations that may be demanded.

At this time, in pressing cases, the children also are to be presented to the physician from the rooms not visited that day, especially where there is suspicion of contagious disease.

The health cards of all the children having instruction are to be placed before the physician or sent to him. . . . . The class teacher shall be present at the time of the medical inspection. The whole general arrangement is under the charge of the school director. The medical treatment of the pupils who are ill, is not a matter for the school physician; such children are rather to be directed to their home physician or to a physician for the poor or a special physician or to some hospital. In case of the latter children this can be done orally. In case such warning is without effect, appropriate printed instructions are to be filled out for them, as well as for the younger children. This should be done only in case of serious disease, where the interest of the children or the school demands it. In filling out the proper formula, every harsh expression or the like is to be avoided. It shall be the duty of the school director to send warning or advice to the parents.

III. The health cards are to be preserved in permanent books in the different class rooms, and to be kept in the school as long as they are not demanded by the school inspector.

The cards marked "medical control" are to be placed before the physician at each visit to the room. If the child passes from one school to another, then his health card is to be sent to him through the school director.

IV. At the request of the school director, the school physicians shall investigate individual cases in their homes, in order to determine, in case the parents bring in other satisfactory medical certificate, whether absence from school is excusable.

V. The school physicians shall inspect the school localities, and their equipment, at least once in summer, and once in winter. The observations made at these times as well as at the other visits in regard to the character of the objects inspected, as well as the condition of cleanliness, ventilation, heating and lighting, and the proposals or recommendations resulting from these observations, are to be entered by the physicians in a book kept for this purpose by the school director.

VI. The school physicians shall not have the right to give independent instructions to the school directors and teachers, to the janitors, and other school servants. If they believe that the recommendations made by them in respect to the treatment of the children, or the hygiene of the premises, is not given sufficient consideration, then they shall present their complaints with reference to this through their representative in the school hygiene commission. In pressing cases, they can make besides, statements before the city school inspector, or before the Royal Kreisphysikus.

VII. To obtain a hearing of this kind for the purpose in question, the representative of the school physicians in the school hygiene commission shall collect his colleagues for general discussion, to which the Royal Kreisphysikus shall be especially invited, if the question concerns the sanitary condition of the premises. In winter the school physicians shall give short lectures on the most important questions of school hygiene before the teachers' meetings.

VIII. The school physicians before the 15th of May for each year shall present a written report of their work to the senior school physician. The latter shall place the separate reports with a short comprehensive general report before the magistrate by the first of June. In preparing the report the following seven points are to be considered:

(1.) Tabulated statistical tables of the results of the initial examinations.

(2.) The number of the consultation hours held, and the official visits to the class rooms.

(3.) The number and kind of the more important cases of diseases which have been investigated in the consultation hours.

(4.) Any special medical dispensations made (limitation of the hours of instruction of gymnastics excepted).

(5.) The number of written communications sent to parents.

(6.) The number of school children under special medical supervision or control.

(7.) A summary of the notes in regard to the premises that have been entered in the hygiene book.

IX. If the school physician, except during vacation, leaves the city for longer than one week, then he shall provide the authorities with a capable substitute free of cost.

X. The school physicians shall receive for their work a yearly honorarium divided into quarterly rates, from the city treasury.

XI. In case of proof of neglect of duty, the magistrate can dismiss a school physician at any time. In other cases, both on the part of the school physician and the magistrate, the office can be vacated only after notice of three months.

XII. The magistrate reserves the right to change or enlarge these regulations.[1]

(Wiesbaden, May 30, 1897.)

The number of pupils allotted to a single physician in Berlin (5,400) is altogether too large. In Dresden it is from 4,000 to 5,000; in Leipzig 3,000 to 4,000; in Nuremberg over 3,000; but in Wiesbaden, Darmstadt and Offenbach a. M. only from 1,000 to 1,900 are allotted to one physician. With the larger number, the function of the school physician is likely to be largely a decorative one, and for the work required the number in Wiesbaden is the maximum.

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[1] For a recent change see Z.f. Schulzes., 1900, No. 1, p. 59.

In this country where medical inspection has been tried the aim has been chiefly to combat contagious diseases. The further functions of health inspection which are included in the duties of the school physicians in many European cities have not been attempted; but so far as work of this kind has been done, it has been chiefly by means of special investigations by teachers, superintendents, physicians, or others interested in some special subject. In this way many measurements of school children have been made by Bowditch, Porter, Boaz, and others; and tests of the senses or the like have been made by Allport and others.[2]

In 1894 medical inspectors were appointed by the Board of Health in Boston, and the duty of the inspector is as follows:

To visit the schools of his district daily at the opening of the session, examine all pupils whom the teachers have found ill or complaining, to give teachers advice concerning them, make a record of cases in a book kept by the principal, and forward daily and weekly reports to his chief. In case a child is found suffering from a contagious disease, a courteous note is sent to the family physician, if he is known, or a card stating the cause of exclusion. The Board of Health then takes the matter in hand; and the inspector as the agent of this board visits at the homes cases of diphtheria and scarlet fever. A similar plan has been adopted in Philadelphia, New York, Chicago, and something has been done in the way of medical inspection in several other cities[3] and towns.

In some private schools medical inspectors have been employed and their functions extended considerably beyond that of merely noting and excluding cases of contagious diseases. For example, such a plan is adopted in the Workingmen's School in New York City. The Director, Mr. Reigart, writes as follows in regard to the plan and results:

"The information in regard to the general health and heredity is kept in a separate medical record, and in this book are also entered the results of examination of sight, hearing, and general physical condition, besides the exact measurements of height, weight, arms, chest, and lung capacity. In case of defective sight or hearing a letter is sent to the parents advising

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[1] Z. f. Schulges., 1899, No. 1, p. 40–42.

[2] See Louis N. Wilson's Bibliography of Child Study, Worcester, 1898, 1899.

[3] Besides the special Health Reports see, for a convenient résumé, an article by Miss Dora Keen, Medical Inspection of Schools, Phila. Med. Journal, 1898.

attention by a specialist; and in case of deficiency in general health, general or specific advice is given. Of course this correspondence must depend very much upon the class of children examined. Some families have their own physicians, others are advised as to the use of a dispensary, etc. In some cases the school physician makes special visits.

"The children are examined very soon after entrance as to sight and hearing; the measurements are then taken more leisurely. I have also had the school physician observe the children in the class rooms, noting their appearance and reactions under school conditions, rather than the examination in a special office; though a special examination is given whenever a teacher or physician thinks it advisable. Perhaps that part of the physician's work which is of most immediate value is his inspection for contagious diseases. The doctor visits the school three times a week; suspicious cases are referred to him, as are also applications for re-entrance after a case of contagious disease."

At the William Penn Charter School in Philadelphia,[1] "a careful examination of the whole school is made immediately after the opening in the autumn, and again just before the summer holidays. These examinations consist of tests of the strength of various parts of the body and such measurements as indicate the extent of physical growth. The results are all recorded in the Report Books, and in due course are submitted to the inspection of the parents. If a comparison of the two latest reports shows the boy to be either standing still physically or retrograding, his case demands prompt attention; if, on the other hand, he is found to be advancing, it can be accepted as certain that his school work agrees with him. These examinations include tests of the eye-sight and hearing by skilled specialists, the purpose being to furnish parents with timely notice of any defect which might otherwise be overlooked, and to obtain data for the proper seating of the boys in the schoolroom."

RESULTS.

The results of medical inspection in the public schools in this country so far as tried, have been in a large measure satisfactory. While much remains to be accomplished, the success of the plans adopted for the checking of contagious diseases has been noteworthy. Convenient résumés of work accomplished in the larger cities have been given in medical journals, and in the Report of the Commissioner of Education, for 1897-'98. The report for Boston[2] gives typical results. "For the fourteen months ending December 31, 1895, 16,790 pupils were examined, 10,737 of whom were found to be ill, 6,053 were found not to be ill, and 2,041 of these were too ill to remain in school for the day." "Seventy-seven cases of diphtheria, 28 cases of scarlet fever, 116 of measles, 28 of chicken pox, 69 of pediculosis, 47 of scabbies, 47 of mumps, 33 of whooping cough, and 8 of congenital syphilis were found in children sitting in their seats, spreading these diseases to other children. The remaining 10,372 sick children were suffering from a large variety of other diseases."

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[1] The William Penn Charter School, Philadelphia, 1900, pp. 27-28.

[2] See Mass. State Board of Health Report, 1895, p. 756. Cited in Report of Com. of Ed., *loc. cit.*, pp. 1489-1491.

The Report for 1896 states that "The medical inspection of schools has been continued during the past year, with the same encouraging and satisfactory results as during the previous fourteen months." Since that time the work has been continued and similar results reported.

As regards the actual work accomplished by school physicians in Europe, who have more extended functions, rather a small amount of data is at hand, but some very interesting reports have been made. The following are a few examples:

The report of the city school hygiene commission in Wiesbaden for 1898 and 1899 in regard to the work of the school physicians, shows that the new plan is succeeding well in that city. Some of the details of the senior physician's report may be cited as illustrative.

According to the last report,[1] the superficial examination of the newly entering children was made in the first three days, but without special result. In the course of the first three or four weeks more thorough examination of thirteen hundred children was made, and only fifteen were exempted from this by the presentation of a certificate from the home physician. The result of this examination showed in the middle schools as regards general health, 44.9 per cent. good, 54.8 per cent. medium, 3 per cent. bad. In the people's schools, on the other hand, 34.4 good, 58.8 medium, 6.8 per cent. bad. Among about three hundred children in the middle schools, less than eleven per cent. were found suffering from diseases, not reckoning defects of the teeth; and among about 970 children in the people's schools, 51 per cent. In eight cases contagious diseases were detected, and the children immediately excluded from the school. Three cases of scarlatina, one of measles, and four of whooping cough. Drastic measures adopted in regard to pediculosis, namely, compulsory cleaning at the city hospital in three cases, had a good effect; for the number of cases of children suffering from parasites decreased from 194 in the previous year to 125. In the course of the school year in some one hundred cases written communications had been sent to the parents in regard to the diseases of their children, and in 65 cases, as a direct result, pupils had been supplied with spectacles, had received medical treatment, etc. In some 80 cases special care in instruction, gymnastics, etc., had been arranged for at the advice of the physician. Further, 36 teachers from the different schools had received a short course of instruction in regard to emergencies, etc.; and in common sittings of the school physicians with the school hygiene commission a number of questions relating to questions of hygiene had been discussed.

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[1] Zeitschrift für Schulges., 1899, No. 12, pp. 728–733.

The yearly report of the activity of the school physicians in Darmstadt for the year 1898–9 gives the following statistics:[1] Among 5,502 children tested the general health in 26.3 per cent. of the cases is reported as good; in 68.62 per cent. of the cases it is reported as fair, and only in 280 cases is the report bad, namely in 5.08 per cent. of all. 2,308 cases of disease were observed, most frequently anæmia, about 10.5 per cent. of the girls and 2.5 per cent. of the boys; then scrofula, rickets, diseases of the bones, diseases of the mouth, nose and throat. About 80 per cent. of the children tested had bad teeth; parasites were found in about 200 cases. These children were placed under constant supervision and in 5.3 per cent. of the cases special care was required during instruction. 507 written communications to the parents were made. Along with the supervision of the health condition of the children, attention was given to the hygiene of instruction, and anything amiss in this respect was pointed out. The regulations could not be completely carried out, especially was this true in regard to examining the children twice each semester; one investigation of all the children a semester was scarcely possible.

The experiments with medical inspection have not been altogether successful. The reasons are four-fold. First, in many cases the number of children (four to six thousand) allotted to one physician has been altogether too large; second, in many cases the physicians appointed have not had proper training, being ignorant of school hygiene; third, the teachers have not always co-operated properly; fourth, the parents in many cases have not only failed to appreciate the work of the school physician, but have put obstacles in his way.

Contagious Diseases and the School.

The prevalence of contagious diseases is dependent to a considerable degree on the season of the year. Dr. Berger has studied the influence of the time of year on certain contagious diseases among school children, and made an investigation of 347 cases of diphtheria, among these 176 school children; 128 cases of scarlet fever, of these 70 school children; 153 cases of measles, of these 86 school children; and 23 cases of typhoid fever, among these 3 school children.[1] He finds that diphtheria among school children as well as among others, is most frequent in the winter months, rarest in the summer months, June and July showing the fewest cases, January and February the most. Scarlet fever too, is most common in the winter, and the months from March to July show the smallest number of cases. Measles occurs more frequently in the winter months than in the summer months, but typhoid fever occurs most frequently in August, and is most rare from November to February. In general, the fewest cases of contagious diseases occur in June, and the most in December and January. In determining this ratio, the conditions of the weather play an important role, but he does not deny that there are other factors: the conditions of school life during the colder weather, clothing, etc.

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[1] See Z. f. Schulges., 1899, No. 11, pp. 637–650.

That the school is an important factor in spreading contagious diseases has been shown not only by everyday experience, but also by the results of special investigations. Koeroesi,[2] for example, found during the three-quarters of the year when the school was in session, 4,400 cases of measles per month, but for the vacation month of August only 780 cases; for the month of September, the first of the school year, only 639; and only 1,695 for October. Taking the four quarters of the year, there were for the three months of vacation only 3,054 cases, while for the first quarter of the year there were 11,865; for the second, 13,258; for the third. 13,147. In part this might be accounted for by the influence of the seasons, but further proof of the causal relation between school attendance and the spread of measles was found from the fact that when the time of vacation was changed, as occurred one year on account of the cholera, the period of minimal number of cases, was altered correspondingly. Scarlet fever, diphtheria, and whooping cough especially are spread by the school.

The investigations made in London by Murphy, for the years 1892-'93, show this greater prevalence of contagious diseases during the school period in a very striking manner, especially his curves for scarlet fever and diphtheria for the ages from three to thirteen. These show a deep depression of the curve at the time of the summer vacation. Dr. Schaefer has compiled statistics in regard to contagious diseases from the medical reports of Schleswig-Holstein and Hamburg for measles, scarlet fever, diphtheria, and whooping cough for some sixteen years. His results are based upon 230,000 and 150,000 cases respectively, hence the effect of chance seems to be ruled out and distinct influences are apparently indicated. In his result the curve for scarlet fever for Hamburg shows a saddle-form sinking of the curve at the time of the summer vacation in exactly the same manner as in Murphy's diagram; the same is true of the curve for diphtheria. The curve for measles had a somewhat different form, reaching its highest point in May and June; also with the beginning of July a falling off began which continued beyond the period of vacation up to the end of August. In the last week in August, for example, in Hamburg, a total of only 575 cases for the eighteen-year period appeared against 2,723 cases in the last week in June; but the fact that the morbidity curve for measles did not attain its lowest point at once or immediately with the close of the school and did not rise immediately when school began again, is what might naturally be expected on account of the relatively long period of incubation for this disease. In striking contrast to these three diseases is the morbidity from whooping cough. This curve rises in a marked degree in July and August. Whooping cough, however, is largely a disease that falls in the period before school age.[1]

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[1] Zeitschrift für Schulges., 1898, No. 1, p. 26.

[2] See Kotelmann, Ueber Schulgesundheitspflege, München, 1895, Baumeister's Handbuch, Zweiter. Bd., 2. Abtg., p. 383.

That the school is a factor in spreading contagious diseases can be illustrated probably in any city of 100,000 inhabitants. At least it can be shown that the per cent. of such diseases is increased greatly during the part of the year when the school is in session. A tabulation of the cases of contagious diseases for the different months of the year for the city of Worcester made from the official reports of the Board of Health by my colleague, Dr. Hodge, shows the usual increase during the school period, as seen from the curves on page 84.

Two curves are given for each disease, in each case the upper curve is the morbidity curve, the lower the mortality curve. The heavy ruled lines at the bottom represent the school period; the vacant spaces between ruled lines the vacation. That the minimum number of cases occurs during the vacation is clearly seen. Take diphtheria, for example, the average number of cases per month for the school year 1893-94 was 16.9, for the vacation months of June and July 10.5; for the academic year 1894-95, 18.9, for the vacation months 11; for 1895-96, 31.5, for the vacation months 18.5; for 1896-97, 33.2, for the vacation months 11, for 1897-98, 27, for the vacation months 13.

These curves show typical results, similar ones might be made from the morbidity statistics found by a number of different investigators in different countries. The significance of such curves is obvious. They show a prevalence of these contagious diseases during the school period, and a decrease in the number of cases during vacation. The causes of this greater prevalence during the months of the school year are perhaps many; among these are the influence of the weather, the long vacation coming at the most favorable season of the year; unhygienic conditions in the home as regards clothing, temperature, etc.; and perhaps especially unhygienic conditions of school life,—the crowding of the children into small rooms, lack of cleanliness, the dust in the air, etc. Whatever may be the chief cause, it is clear that these diseases are more prevalent during the school period. Children during these months of the year are more likely to be exposed to these diseases; if they are sent to school they are more likely to be exposed than if they remain at home, because they are brought into close contact with a large number of other children.

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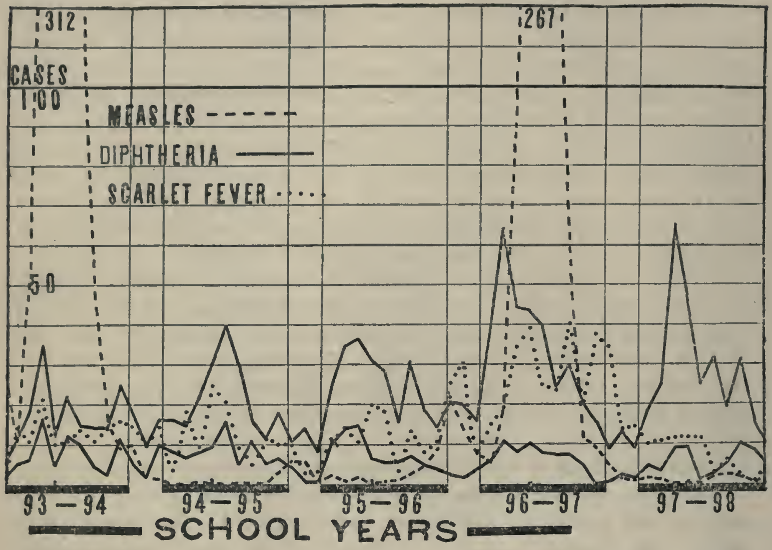
[1] Schäfer: Ueber die Gefahr der Verbreitung ansteckender Krankheiten durch den Schulbesuch und die in dieser Hinsicht erforderlichen Maassnahmen. Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflege. Band 30, 1898, pp. 629–630.



If the morbidity curve for measles had been given for ten years instead of five, the significance of the great rise in the curve at an interval of two years would be apparent; for the more extended curve shows a similar rise and fall at intervals of two years throughout its entire course. This illustrates the so-called law of immunity. A great epidemic of measles renders the majority of children in the community immune from the disease and another epidemic will not occur until more children are born and a certain proportion of the total number of children become susceptible; that is, until the so-called "explosive point" is reached. According to Shelly the explosive point is reached when one-third of the total number of children have not had the disease, and it has been estimated that the interval between epidemics is five years in rural districts, while in large cities there is an epidemic every other year.[1] Worcester being a small city of about 100,000 inhabitants, the interval would naturally be somewhere between the period for a large city and that for a rural district; that is, once in about two or three years an epidemic might be expected, and this is precisely what the curve for ten years shows.

While the conditions of school life favor the spread of such diseases, with competent medical supervision the school affords also favorable opportunity for checking them. With all the children collected, inspection is easy; and cases are detected and isolated in the early stages that otherwise might pass unnoticed until the whole neighborhood was exposed to infection. But the work of detecting such diseases and of excluding children from school and readmitting them after recovery is something that can be done only by a physician.

As far as contagious diseases are concerned, the need for a school physician is too obvious to be argued in detail, but the advantage of such medical supervision may be seen also in regard to even many obscure diseases. Take for a single illustration, a very prevalent disorder—headache. It is not by any means easy to determine always the cause of headache in a school child. It may be a temporary disorder caused by the bad air, extreme heat, or other unsanitary conditions connected with the schoolhouse. It may be due to overwork; it may be a symptom of impending illness of some acute sort. It may be the result of chronic anæmia, or of some nervous or organic disease. It may be due to catarrh, or an adenoid growth in the naso-pharynx, or it may result from a decaying tooth, or from astigmatism or other eye defect. Not to mention the child's suffering, such a disorder interferes most seriously with school work, and the proper diagnosis of the cause may well be a matter for special medical knowledge.

OBJECTIONS.

Many objections have been urged against medical inspection. In the first place, some physicians have objected on the ground that the creation of a special class of school physicians would interfere with the practice of regular physicians; and objection has been made on the score of favoritism. Again, objection has been made more seriously by teachers. It has been thought that medical inspection would interfere necessarily with the school work, and the right of special officials to come into the school would be a constant source of disturbance and friction. Objections have been made also by the community on the score of unwarranted interference with individual liberty. Dr. Arnold's report[1] shows some of the difficulties that the teacher and inspector are likely to meet from the ignorance of parents.

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[1] For a discussion of this point see Schäfer, *loc. cit.*

It is difficult to answer these objections seriously, in most cases the fact that they are made is a strong argument itself for the need of school physicians. The existence and work of such inspectors have an excellent influence upon the school in directing attention to the health of the children, also as an educating factor in the community. The most grave objections are those urged by the teachers. These have been stated by Schiller and others in Germany.

The Teachers' Association of Hannover-Linden adopted in 1899 the following resolutions which show the plan which many teachers favor instead of medical inspection.[2]

(1.) All pupils received into the school should bring with them a physician's certificate of health, in which proof is given by answers to definite questions that the child is physically capable of the instruction.

(2.) Such certificates of health may be given by any physician. The State should appoint physicians to provide these health certificates without pay.

(3.) If it is proved in the course of the instruction that a child is not sufficiently well for the school work, then he shall be examined by the physician appointed for this purpose. If this lack of physical ability is permanent, then the child, even against the will of his parents, may be sent to an institution better fitted for his case, an institution for idiots, blind, deaf, or special school, in case the parents do not prefer to have their child instructed privately.

(4.) In case of sudden illness among the pupils, during the school period, the director of the school has the right to call in any physician who happens to be accessible. In case the parents refuse, the cost for such consultation is to be borne by the city.

(5.) Medical supervision of the school buildings and the instruction in regard to universally accepted hygienic principles is necessary. The enforcement of these principles is controlled better (because permanently), without disturbing the instruction, without loss of time, without red tape, and without expense, by the teachers or the supervising school physician.

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[1] See Report of Com. of Ed., 1897–1898, Vol. II, pp. 1494–1499.

[2] Zeitschrift für Schulgesundheitspflege, 1899, No. 7, p. 420.

(6.) The constant supervision of the health condition of the school children is better left to the parents.

(7.) Medical certificates in case of absences and remission of work, as well as the notices of contagious diseases, have proved themselves to be sufficient.

Further, Director Schwalbe has argued[1] that the duties allotted to a school physician can only be in two directions: first, supervision of the sanitary conditions, air, light, water, heat, etc.; second, of the health condition of the children. In regard to the first point he maintains that these investigations may be made just as well by the teachers of natural science as by the physicians. Most of the physicians are not at all prepared to do this any way. As regards the second point, if the investigation of the health condition of the children is to be of any value it must be made carefully; but in Wiesbaden only three or four minutes were allotted to the examination of each child. He was convinced that it would soon appear that a thorough hygienic supervision of the school can be made only by the teachers.

HEALTH INSPECTION IN GENERAL.

The duties included in health inspection are obvious from what has been said; they are practically the same as those pointed out by Drs. Cohn, Esmarch, Schubert, Schiller, and other German writers.[2]

Who ought to perform these duties is another question. At the present these functions must be divided between the teacher, the superintendent, and special medical inspectors. Just what duties should fall to each must be determined largely by local conditions. In general outline, however, the natural division is apparent. All matters relating to contagious diseases, exclusion of children from the school, the making of cultures, closing the schools in case of epidemics, and certification of recovery, and the like, fall to the lot of the special school physician. He will naturally too, have charge of all tests of the physical condition of the pupils, and make the special examination of individual cases that may be necessary. He will further observe and report on any grossly unsanitary conditions in the schoolhouse or the surroundings, and he may naturally be expected to give advice in regard to the hygiene of instruction. On the other hand the teacher should naturally be expected to have constant oversight of the details of school hygiene, to report suspicious cases to the medical inspector, and to attend especially to all matters relating to the hygiene of instruction; noting whether the children are clean, whether they are overworked, whether certain occupations make them nervous, whether they sit in proper position, whether they strain their eyes, etc. In many places the teachers will also make many of the physical tests, at least the tests of sight and hearing, under the direction of the school physician. The other functions of health inspection not included in the duties of the physician on the one hand, and beyond the province of the teacher, should be attended to by the superintendent, and he should have general supervision of the sanitary condition of the buildings, direct the teachers in regard to the daily routine in matters relating to hygiene, considering especially the hygiene of instruction, and also should co-operate with the school physician in the precautions against contagious diseases and care for the general health of the pupils.

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[1] Z. f. Schulges., 1899, No. 7, pp. 430–431.

[2] See the various articles in the Zeitschrift für Schulges.; "Die Schularztfrage in Breslau," Von Hermann Cohn, 1898, No. 12, pp. 643-659; "Schulärztliches," Von Professor E. von Esmarch, 1899, No. 7, pp. 373-396; "Vorschläge zum weiteren Ausbau des Schularztwesens," Von Dr. Paul Schubert, 1899, No. 8, u. 9, pp. 445-478; "Bedeutung und Aufgaben des Schularztes," Von Prof. Dr. Schiller, 1899, No. 10, pp. 573-579.

At present no other plan except this division of functions seems possible. In order, however, to make such a division of labor successful, it is absolutely essential that there should be intelligent co-operation of the teachers, superintendents, and inspectors, and to make this possible, special instruction of all three classes is necessary.

First the teachers should have special instruction in school hygiene. This is necessary, not merely for the direct value of the knowledge of hygiene in the schoolroom, but still more in order that the teachers may have the habit of looking at school matters from the point of view of hygiene and of considering the effect of different conditions and occupations on the health of the children, in a word, that they may have what may be called a hygienic apperception. In every normal school special courses in school hygiene, giving a thorough acquaintance with all matters of hygiene which especially concern the teacher as well as a general knowledge of the whole subject of school hygiene, should be prescribed for all students. It seems absurd to be compelled to plead for this; yet, in the majority of normal schools, no courses in this subject are given, or the work is subsidiary to something else, given merely incidentally in connection with school management, psychology, or the like. A consensus of educators declares that the aim of education is normal healthy development of the individual child, but the one subject which treats especially the conditions that favor normal healthy development is omitted from the curriculum. Again there is a growing belief that education must be based upon scientific facts, but the one subject in which the scientific method has been most used, and where a large body of scientific facts has been collected, namely school hygiene, is not taught.

Second, the superintendents should be required to have a knowledge of school hygiene. However important skill in politics, or finesse in dealing with parents, or tact in managing teachers may be, no superintendent can to-day afford to be ignorant of school hygiene; and any community that permits such ignorance is careless in regard to its best interests. If the office of the superintendent is to be something more than that of a mere politician, the knowledge of school hygiene is certainly one of the essentials in the equipment of the supervisor of the schools. Most praiseworthy illustration of the attention that some superintendents are giving to this subject is furnished by a few recent school reports.[1]

Third, the school physician also should have special training. Dr. Schuschny has pointed out that the ordinary physician is not fitted for this special work. And he reports that preparatory instruction for school physicians is given in certain courses in the universities of Budapest and Klausenburg. The course continues for three months, and includes besides theoretical and experimental hygiene tests of vision. An examination is held at the end, consisting of a theoretical test in school hygiene, a practical test, and a lecture in the seventh class of the middle school.

Finally, for the best success it is essential that the community should be educated in regard to matters relating to health. From a purely economic point of view a strong argument can be made for medical inspection, for when disease is prevalent in the school the community has to pay for services that they do not get because the children are absent from school; and also, an epidemic of disease is an extremely costly thing for the community. Although medical inspection may not be very expensive, still it should be frankly admitted that it will cost something. It is true, both in the home and at school, that health costs money, but there is no investment that pays better dividends. Any community, however, that is willing to argue this question on a purely economic basis is one that so sadly needs education in regard to hygiene that any plan of health inspection will be seriously handicapped there.

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[1] As the best example of those known to the writer, see that of Supt. G. E. Johnson, in the Report of the School Committee of the Town of Andover, Mass., 1900. This report reflects not only the knowledge of school hygiene and the training of the superintendent who wrote it, but the good sense of the school committee who support such an official in his efforts.

The readiness of the community to respond to any demand of hygiene when forced upon their attention is seen in the blind way in which legislation has been passed in regard to general instruction in hygiene, especially with reference to the effect of the use of alcohol and narcotics. Every State in the union, with one or two exceptions, now has a law requiring such instruction, and in one State this is the only subject prescribed by law. Yet, as has been pointed out above, special, extended study of school hygiene is not usually required in normal schools, and a knowledge of the subject is not as a rule required in the examination of teachers. Such legislation and lack of legislation appear ludicrous if one can forget for the time being the serious results that are likely to follow. The children are required to study hygiene, the teachers are permitted to neglect it. It is as if the directors of a hospital should require all the patients to study hygiene while the interns and nurses were permitted to enter upon their work without any such knowledge of hygiene and physiology. It may be said, of course, that the school is not a hospital, and yet observation and investigations show that in every schoolroom there are liable to be enough sick children to fill at least a small ward in a hospital, and hygiene is concerned anyway primarily in the prevention of disease and the fostering of normal healthy development rather than in the cure of disease. This blind legislation, however, shows the vague feeling of the community that something should be done for preserving the health of the children in the schools.

Special Medical Inspection.

While, as has been shown, the functions of health inspection must be divided, and teachers and superintendents have an important part of the work, still the need for special medical inspectors is evident from the facts mentioned at the outset; and the experiments with medical inspection, however unsatisfactory they may have proved, furnish evidence that emphasizes this need. Special provision for health inspection in the schools will soon be demanded everywhere. It is desirable that our own schools should profit in this matter from the experience of other countries. In view of what has already been done, although details must be worked out in the light of further experience, it is not difficult to determine what the general aim, scope, and plan of such inspection should be.

The aim of special inspection is four-fold. First, to check the spread of contagious diseases; second, to avoid over pressure and diseases due to the conditions of school life; third, to educate the teachers and the community in regard to the importance of considering the hygienic aspects of all matters relating to education; and fourth, to contribute something to the advancement of the science of school hygiene. While the last function must be at first at least incidental to the others, nevertheless it is not too much to expect that ultimately the data collected in this way will be of great scientific value if the work is properly directed.

The general scope of the school physician's duties is clear from what has been said already. In many places chief among them are the following: the inspection of buildings and equipment, especially as regards cleanliness, testing of air, water, light, weighing, measuring, and general physical examination of the children; testing of the senses, examination of teeth, nose, throat and naso-pharynx, and of ability to work and to resist fatigue, general observation of the nervous condition of the children, etc., besides special care for those who are defective or ill, and the detection of contagious diseases.

As in every other matter concerning the schools in this country, the plan that can best be adopted must be determined largely by the local conditions. In the large cities, however, some such plan as the following would seem advisable. A special health officer standing on a par with the superintendent of schools should be appointed and paid a suitable salary. While it may be necessary that he should be under the authority of the Board of Health, nevertheless he should have a seat and voice in the School Board, should be consulted in regard to matters relating to health by the superintendent, and he should have a large measure of independent power. But such an official should be more than a mere school physician. He should be responsible for all matters pertaining to school hygiene in the broadest sense. A chief function of his office would be the co-ordination of the different agencies whose work is related to the health of the school child,—the architect, the sanitary engineer, the specialist in heating and ventilation, the special school physician, the janitor, etc. He should have general supervision of all the functions of health inspection, whether of the school physician or of the teacher. Nor is there anything so revolutionary in this plan. According to the Cleveland plan of administration, the pedagogical functions of the superintendent have been differentiated from the business functions, and the former are attended to by one official, namely, the superintendent, the latter by another official, the director. The plan of health inspection suggested would merely go a step further, and give one individual special power to co-ordinate the different agencies in school hygiene and make him responsible for all matters relating to health in the school. Until some one official, with both power and responsibility, is appointed to have special care of health conditions in the school we cannot hope to have existing evils reduced to a minimum and normal healthy development made the primary aim of education in our public schools.

This special health officer should be a man with competent training, having an expert knowledge of school hygiene as well as general medical training; as has been pointed out by German writers, it is not enough that such an official should have the general medical knowledge of the ordinary physician. This expert should have power to appoint the necessary number of medical assistants with the advice and consent of the Board of Health. And the number of children allotted to one physician should not exceed one thousand or fifteen hundred.

So far as concerns medical inspection in the narrow sense, with one expert chief inspector it would probably be possible to appoint young physicians for assistants and pay them merely a nominal salary, and in this way the expense need not be extremely great. The experience both in Europe and in this country indicates that, if the function of the school physician is limited to the detecting of contagious diseases and the like, the cost need not be considerable. In Boston young physicians have been found ready to undertake the work at a nominal salary, $200 a year.

In Germany very much more has been undertaken, and yet the cost has not been very great. In Wiesbaden for the first year the cost per pupil was twenty pfennige, *i. e.*, five cents. Now, with six physicians for nine thousand children with a salary each of $150, the cost per pupil is forty pfennige, *i. e.*, ten cents. This includes two examinations a year for each child. In Dresden with seven school physicians, and Leipzig with sixteen school physicians and sixty thousand pupils, the salary is only 500 marks. Darmstadt does better and pays its four physicians 1,500 marks each. Cairo pays her three school physicians still more; the first receives 9,600 marks, the two others 2,880 marks.[1]

CONCLUSION.

It will mark a great advance when all schools have special medical inspection in the narrower sense, but the ideal suggested above should not wait long for realization. Observation and special research show that a considerable percentage of the children in the schools are in such a condition of ill health that their physical development is vastly more in need of special attention than their intellectual development. The problem of caring for such children and of preserving the health of those who are normal is one of prime importance. Health inspection in some form is imperative. The details of any plan must be determined with regard to local conditions; but in the view of the writer three things are essential.

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[1] See Cohn, *loc. cit.*

First, the appointment of school physicians.

Second, the education of superintendents, teachers, and the community, as well as of those who are to be school physicians, in the essentials of school hygiene.

Third, the appointment in the large cities of a health inspector, ranking with the superintendent, and responsible for all matters relating to health in the schools.

BIBLIOGRAPHY.

Besides the annual reports of state boards of health and of the health departments of cities, numerous articles upon the subject of medical inspection and related topics have recently appeared in the various journals of medicine and hygiene. The following is a representative list of papers.

ARNOLD, H. D. Some Results of the Medical Inspection of Schools in Boston. Annals of Gynecology and Pediatry, Vol. XI, Jan., 1898, Reprint, pp. 16.

BURGERSTEIN, LEO. Schularzt, Rein's Encyklopädisches Handbuch der Pädagogik, Bd. 6, pp. 233-256. Contains a valuable bibliography.

CLARK, HANNAH B. "Sanitary Legislation Affecting Schools in the United States." Report of the Commissioner of Education, 1893-94, Vol. II, pp. 1301-1349.

COHN, HERMANN. Ueber die Nothwendigkeit der Einführung von Schulärzten. Leipzig, 1886. pp. 54.

Ibid.: Die Schularztfrage in Breslau. Zeitsch. für Schulges., 1898, No. 11, pp. 579-596; No. 12, pp. 643-654.

DUKES, CLEMENT. "The Inspection of Schools from the Medical and Sanitary Point of View." Educational Times, Dec. 1, 1894, pp. 505-511.

EKERIS, VAN. Notwendigkeit, Aufgabe und Stellung der Schulärzte. Bonn, 1899. (Sammlung päd. Vorträge, herausg, von Meyer-Markau, XII Bd., 4 Heft.)

EULENBERG UND BACH. Die ärztliche Schulaufsicht in Schulgesundheitslehre. Das Schulhaus und das Unterrichtswesen vom hygienischen Standpunkte. Zweite umgearbeitete Auflage, Berlin, 1899, pp. 1194-1214.

GAERTNER, A. Ansteckung und ansteckende Krankheiten, Rein's Encyklopädisches Handbuch der Pädagogik, Bd. I, Langensalza, 1895, pp. 102-116.

KALLE, FRITZ. Die Lösung der Schularztfrage in Wiesbaden. Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflege, Vol. XXX, 1898, pp. 433-447.

KEEN, DORA. "Medical Inspection of Schools." Reprint from the Philadelphia Medical Journal, 1898, pp. 12.

MANGENOT, DR. L'inspection hygiènique et médicale, des écoles. Paris, 1887. pp. 64.

Ibid.: L'examen individuel et la bulletin sanitaire des écoliers. Paris, 1894.

ROBERTS, CHARLES. "The Medical Inspection of, and Physical Inspection in, Secondary Schools." Royal Commission on Secondary Education, Vol. V, 1895, pp. 352-375.

SCHAEFER, DR. Ueber die Gefahr der Verbreitung ansteckender Krankheiten durch den Schulbesuch und die in dieser Hinsicht erforderlichen Massnahmen. Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflege, Bd. 30, 1898, pp. 617-666.

SHARPE, DR. N. W. Municipal Medical Inspection of Schools. Phil. Med. Journal, April 29, 1899.

SHATTINGER, DR. CHARLES. "Municipal Medical Inspection of Schools." St. Louis Medical Journal, April 28, 1899.

SCHILLER, HERMANN. Die Schularztfrage. Sammlung von Abhandlungen aus dem Gebiete der Pädagogischen Psychologie und Physiologie, III, Band, Heft. I, pp. 56.

SCHUSCHNY, H. Geschichte und Entwickelung der ungarischen Schu arztfrage, Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflge, 1897, Bd. 29, pp. 530.

STEINHARDT, DR. IGNAZ. "Zum augenblicklichen Stand der Schu arztfrage in Deutschland." München, 1899. pp. 20.

SUCK, HANS. Die gesundheitliche Überwachung der Schulen. Ein Beitrag zur Lösung der Schularztfrage. Hamburg und Leipzig, 1899. pp. 36.

THOMPSON, T. W. The Natural History of Infectious Diseases, in Stevenson and Murphy, Treatise on Hygiene, II, pp. 243-381.

Zeitschrift für Schulgesundheitspflege. Edited by Kotelmann, 1888-98; since that time by Erismann, Hamburg. Numerous articles throughout the files of this periodical.

Medical Inspection of Schools, Report of the Commissioner of Education, 1897-98, Vol. II, pp. 1489-1511. A valuable and representative collection of the papers in English upon the subject. Contains articles by Dr. Arnold, Profs. Burrage and Fall, Mr. Durgin, and others.

Influence of Schools in Accentuating the Spread of Certain Infectious Diseases. Lancet, 1898, Jan. 21, p. 184, Jan. 28, p. 256, Feb. 4, p. 330, and *passim*.

FOUNDATIONS OF NATURE STUDY.

II.

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Our school curriculum is sometimes likened to a struggling mass of legs, arms and tails, each striving to subordinate all the others to itself and to form the center or main trunk of the educational plan. Discussion is thus rife as to whether language and literature, mathematics, drawing or nature study shall assume the control. This disorganized state of affairs may be due in a measure to vague conceptions in supposedly higher circles of thought as to fundamental functions of science and art. We often hear it said: "art for art's sake," "science for the sake of science," and recently we actually find a book entitled "Nature for Nature's Sake." These expressions are well enough, if they are intended to convey the idea that the value of truth and beauty is above and beyond ordinary means of human expression. It should be clearly understood, however, that none of these things have any "sakes;" and that art, science and nature, so far as they are related to mankind and to human education, exist solely for the sake of human character. And when any such ideas are used to sanction teaching of subjects as ends in themselves, *i. e.*, for their own sakes; when they incline the teacher to lose sight of the child in absorption in the subject, they strike confusion worse confounded into the foundations of any system of education, art or philosophy.

None of these organs of education can ever be more than subordinate organs. To all partisans for this or that special study as the center of our educational system we must say once for all, that none of their pet subjects are large enough to fill the position. Human life itself, human character, human power to do, human happiness, must form the main trunk. Special studies must all take their places as roots and branches, each to push out ever farther and higher and deeper into the universe of truth and beauty to elaborate and bring back such sustenance as shall make human life increasingly worth the living. The words of John Fisk (Destiny of Man, p. 12) have wider applications than his context implies. "Once dethrone humanity, regard it as a mere local incident in an endless and aimless series of cosmical changes, and you arrive at a doctrine which, under whatever specious name it may be veiled, is at bottom neither more nor less than atheism." So, in a system of education, dethrone humanity, displace from its central position the living, fundamental needs of human life and character, and we have only anarchy and confusion.

These fundamental human values attach to the studies of the curriculum, but the danger is, that the living purposes of education become obscured among the trivial details of method which must form so large a part of our work.

Music, for example, may be taught with all perfection of technique, as to tone and scale and interval, but with the result of failing to develop in the child a love for it. Premature forcing of method may, in fact, engender a lifelong dislike. But it remains as true now as when first spoken that he who writes the songs of a people need have no care as to who writes its laws. Here is a human interest which touches the very deepest life of individual and nation. What does the German Empire not owe to "Die Wacht am Rhein;" or England, to, "God Save the Queen?" For how much, think you, could either England or Germany afford to have these songs obliterated from the hearts of their people? Yet, two generations of neglect in musical education, not likely to occur in either of these countries, might go a long ways toward bringing this about.

The fundamental human interest in musical education lies in developing in the soul music which shall keep it white, make it unfit for "treasons, strategems and spoils," and put songs from beginning to end in the heart. In order to do this, and this is a point which applies equally to the teaching of science, we must put our very greatest and best music into our schools. And when we fill the children's hearts to overflowing with great music, there will be no room for the demoralizing street jingles which assail the ear on every side. As I have been informed, from schools in which this has been seriously tried, even little children come to feel their worthlessness and to hate them properly.

So too with literature; I have been told by an intelligent English teacher that Spencer's utilitarian doctrines are tending to banish literature from English schools. But this is not at all the legitimate application of Spencer's teaching. It is nothing short of national and educational suicide, for to literature we must look for ideals of character and life. Gottschall has well said that Schiller did more than any one else in winning the Franco-Prussian war by implanting in every German heart ideals of heroism and love and devotion to country. And the abject defeat of the French is mirrored in their worthless literature.

But down in the foundations of our literature courses we must have the spirit that maketh alive, rather than the letter that killeth. We hear a good deal of shallow talk about doing away with classical studies, not so much just now, perhaps, as a few years ago, by those who do not seem to be able to realize that in them we find ideals of life and visions of beauty which can never grow old.

Turning toward the field of science, mathematics, is sometimes taught as dry mental gymnastics, wholly abstract and apart from human life and interests. No conception could be more unwarranted or grossly false. As a matter of fact, mathematical education touches most intimately every human interest, individual and national. It must be the foundation of every business enterprise. All our buildings from private and tenement houses to most difficult feats of engineering in construction of great public works, the building of bridges, dams, aqueducts or battleships, require it. If they have been built mathematically correct, they will stand the strains and shocks to which they have been figured. If they have been "fudged" together with no regard to the mathematical and mechanical problems involved, or if these have been wrongly solved, we shall have all sorts of calamities, business failures, buildings collapsing, bridges falling through, boilers bursting, ships foundering.

A good example of large national interests attaching to mathematical education may be seen in the battles of Manila and Santiago. Those were "practical examinations," among other things, in American mathematical education, and we may congratulate ourselves upon the result. In final analysis those battles were won by having woven into the warp and woof of the brains of those gunners the mathematical truth that it is only waste of time and ammunition to pull the trigger of a cannon until it is aimed mathematically straight. And on the other hand, Spain has her priest-ridden, superstitious public education to thank for the abjectness of her defeat. It is the necessary consequence of having a force of gunners who apparently seemed to think that they could shut their eyes and bang away, and that the Holy Virgin would supply the mathematical accuracy which they lacked. It may have been hard work enough, some twenty or thirty years ago, drilling ideas of mathematical exactness into the heads of the boys who are now gunners in the fleets; and we catch just a glint of the national interest that hung upon those faithful lessons. Is it not inspiring to hold this larger view always before us? In what other way can we transmute the dross and drudgery of elementary teaching into the gold of human work, than by mingling with the daily task all the best human interest which it may subserve?

I have been obliged to make this long detour to get clearly before us the far reaching human values of education. I have had educators high in their profession look at me in surprise and ask what the human value of a study meant. They seemed to be so wrapped up in ideas of "mental discipline," "training the powers of observation," "acquiring knowledge," etc. etc., or of method grinds of doing this or that, kinds of education that would gain the whole world and lose the soul, that they fail to see the bearings of their own work beyond the walls of their schoolrooms. And I have purposely touched on the values attaching to studies as far removed as possible from our theme in order to escape the charge of partisanship and narrowness which doth so easily beset the educator on every side.

We have briefly treated the side of nature study which touches the fundamental interests of the race. We have found that these are purely biological, the domestication of animals and the cultivation of the soil, these being the primitive, epoch-making steps toward civilization. It remains to consider the subject more particularly from the side of the individual and to inquire in some detail what kind of knowledge of the nature about him is really fundamental to formation of civilized character of the best type.

With the flood of talk and writing we have had about "enriching" the school course and all the complaints about crowdding in too many subjects, it is certainly strange that we have heard so little about proper quality of knowledge and means to its attainment. Even the proverbial quality of "thoroughness" is being repudiated. In quantity and variety nature is infinite, and we may as well drop all thought of learning but a very small part of the whole scheme, so that the quality of what we do learn becomes of tantamount practical importance.

Many will say knowledge of nature should be scientific in quality. This is true, however, only so far as we have the essential idea as to what "scientific" means. It is our present misfortune to be living under a most inadequate notion, a dead, book-museum conception of science. What is included in the dictionary definitition "classified and arranged knowledge" is, at best, but the preserved "remains" of what was once science. Minot states the case exactly when he says in effect that books are the repositories in which science has been decently interred. But this lifeless, cut-and-dried idea of science has usurped the field, and we have elementary text books stuffed from cover to cover with "classified and arranged knowledge." Lubbock well calls them the "dictionaries and grammars of science;" mere tools of knowledge which should only be used when required; and there is great need that the revolt against the dictionary and grammar method in language be carried over into the field of science. The essential idea of science being the process of knowing, books do not contain it, but only men.

That it may be resurrected out of a book by a mere process of memorizing is a most egregious fallacy.

For anything fundamental in regard to nature study we must adopt Lessing's conception of science. According to this, science is the unceasing struggle of the human mind after truth. Furthermore, this struggle is so inseparably linked with normal growth and vigor, and so full of the bounding joy of human action, that the struggle is to be preferred above actual possession of very truth itself. This struggle is thus what chiefly makes life worth living. Indeed, according to Professor Brook's luminous definition of life; "Life is education, conversely education is life;" it is life itself.

In order to see this truth in its important relations we must make a qualitative analysis of knowledge. It will then appear as to what kind of nature study we need to impart the desired quality, and this will bring us to the intellectual foundations which we are seeking.

Huxley has well said that knowledge gained at second hand, by hearsay or from books is infinitely inferior in quality to knowledge developed at first hand by actual experience and direct contact with the phenomena of nature. This is the selfsame idea as is expressed by the proverbial Yankee distrust of "book larnin." But in spite of an apparently clear and generally accepted notion that such infinitely inferior knowledge cannot make a man who is able to do anything worth while in the world of realities and actions; how much besides "book larnin" do we have in our public school curriculum? John Milton, also, makes luminous a similar distinction, and finds the reason why the best youth of his time "grow into hatred and contempt of learning to spend their days in feast and jollity" in the fact that during school life they had been "mocked and deluded with ragged notions and babblements," had been deceived during all their most "docible years" by being set an "asinine feast of sowthistles and brambles, while they had expected worthy and delightful knowledge." And Francis Bacon, in laying the foundations of modern science and education, attempted seriously to distinguish between "The relative values of knowledges." So, too, we find even more ancient discriminations between "knowledge that puffeth up," and "the excellency of knowledge that giveth life;" "knowledge that is to be desired rather than choice gold," and knowledge of which Isaiah says, "Thy wisdom and thy knowledge, it hath perverted thee." And George Eliot somewhere says, in effect, that if the earth and all the heavenly bodies by their revolutions for a thousand years shall have succeeded in taking a grain of conceit out of a single human being, it all would not have been in vain.

Mulling over lines of thought suggested by such things as the above, it has seemed to me that this matter of quality in knowledge must form the rational foundation upon which to build our system of education, the common soil out of which developments of all art and science and all specializations of life should grow. Wholly engrossed, the while, in special pursuits, I supposed that plenty of other men were attending to this side of our educational problem, over in the camp of the pedagogues and psychologists, and that everything was moving, or might soon be expected to begin to move, smoothly and rapidly in this direction. But during my teaching experience in college and university I have been rudely shaken out of this comfortable state of mind to a realization that our exigency is an educational crisis and that every one must take hold. The whole time I have heard professors complaining that they would rather their students should come to them without ever having heard of chemistry or physics or zoölogy or botany, entomology or what not, than to have been given a so-called course in these subjects in the public schools. I do not wish it understood that I think a course in natural science in the public schools should be planned with reference to college requirements. It should clearly be devised as a preparation for life rather than for college. At the same time, if it were a course calculated to best fit for living, it should also best fit for college. If not, college requirements cannot be changed too soon. This matter is becoming of great importance in proportion as co-ordinations are being rapidly effected between public school and college courses. Under the present glaring disadjustment, a child's course in natural science is often a successive chewing over and over again of cuds that become nauseatingly stale. Instead of a natural and healthy progression a child is given technical minutiæ in the grammar school, possibly in the primary or even the kindergarten, the same things are ground over in his high school course and again in the college and still again in so-called university courses, to say nothing of the successive years in each, and, as a result, he naturally comes to feel that he has learned everything worth while a dozen times over. Instead of the normal impulse to go on into the world of life and truth about him, he becomes disgusted with the whole subject.

The question naturally arises at this point; can this lack of adjustment be charged, in part at least, to the crankiness of college professors? Is each one so peculiar in his methods and notions of work that he is unable to build upon the knowledge foundations that others have laid? Possibly I am disqualified from speaking on this point but so far as I have been able to judge, this is true only in rare and notorious exceptions. In practically all cases, if a student is possessed of the energy and the will to work, any instructor is only too thankful. If he have developed in addition some ingenuity and inventiveness which enables him to devise his own methods and apparatus, certainly the majority of professors would prefer that he do his work in his own way.

So far as I can see the main difficulty lies in the habit of mind and the quality of knowledge that the pupil has already acquired. A single concrete instance may make my meaning clear and it has stood before me as a picture which goes a long ways toward explaining the situation.

A boy of good ability has just completed his high school course. In a conversation with a friend the question is raised about going to college. "No," he says, "I have no use for college. A man is a fool to go to college after he has had a good high school education. Haven't we learned everything there is any use of knowing? We have had astronomy and geology, chemistry and physics, botany, zoölogy and physiology and psychology and political economy, and a great many more, I don't see as there is anything more to learn. And if we forget something, why, there are our books: we can learn it over again."

What do we mean by "knowledge?" What do we mean by "knowing" or "learning" a thing? Is it possible that any are so deceived as to think that when a child has read some words in a book, or has heard some words, and is able to repeat them that he has learned anything; at least, anything but words?

That the above is a true picture of a good deal of our high school product cannot be gainsaid, and if it may be considered a sample of the kind of education that Professor Peck is inclined to think a positive misfortune to a great many, "the mother of unhappiness alone," we must fully agree with him, for in so far as "education is life," mis-education may be death.

Analyzing the case more closely, what do we find? First, a mind filled with book and second-hand knowledge of "infinitely inferior" quality; worse still, a mind completely satisfied with this kind of knowledge; and, worst of all, a mind conceited, "puffed up" over its little hoard of rubbish. Do you wonder that such a specimen is the *bête noir* of the college instructor? Around such a man the processes of nature may flow on forever. There is little hope that they will be able to take a grain of conceit out of him. It will probably never penetrate to his encrusted soul that there is anything worth learning that he does not already know, or, at any rate, that he cannot find in a book. In the provinces of any one of the sciences, the names of which he can recite, are vast untrodden fields of truth yet to be discovered for human enjoyment and use, but no chance of his ever treading them. In nature on every side there are things to know something of which his happiness or very life may be depending. If he even knew that he did not know, he might have the wisdom to obtain the help of some one who does know. Even worse, if some conformity to the laws of nature be forced upon him by external authority, possibly by the health officials of the community, he will be just the man to oppose all improvement of existing conditions on the ground that he knows better.

In a word, the knowledge of such a man, instead of being vital and life-giving, growing into fullness with his growth for the enjoyment and use of himself and those around him, is a dead load on his memory, the occasion of a sort of fatty degeneration of the soul.

But suppose a youth in this condition be advised or constrained to go to a university and continue, if we may so designate the process, his studies. What kind of a picture do we have then? His instructor asks him for an account of the work he has done along the line he proposes to follow. Our student names over a number of books and courses he has taken. Very well. The professor next asks him whether he is especially interested in any particular problem that he wishes to solve. He evidently does not understand the question, and the instructor puts it more plainly. Is there not some particular point in this whole field which you are conscious that you do not know and have not been able to find in books, and that you think may be worth your time and labor to investigate? No, he does not think of any such point. He has never been taught to look at the subject with a view of doing anything about it himself, rather, of having somebody else do everything for him. The very essence of science, the first great requisite of all genuine learning, so clearly defined as long ago as the teaching of Socrates, the vivid realization of ignorance has become no part of his mental equipment. For so many weary years he has been compelled to memorize from books and lectures that he has come to feel that education and science consist in this sort of sausage stuffing.

Finally, the instructor shoulders the man bodily, gives him a problem that he is anxious to have worked out, gets all the material and apparatus ready to his hand and tells him to go to work. Next day he calls at the man's laboratory and finds him reading a book. Asks him what he has done? What observations he has made? What experiments he has tried? And finds that he has made no observations, done nothing, but has found a "very interesting book." And so it goes. Every day the man is where he happened to have been dropped the day before. So far as power to do anything with the phenomena of nature as they actually exist in the world he seems to be blighted and paralyzed for life. He has no more "go" in him than a bag of mush. We must agree with Dr. Minot again, when he says it is easier to make a competent investigator out of a dull man than out of a conceited man.

I am not inclined to lay the blame for such specimens on teachers, but rather on the whole educational system that has so much passive instruction, the legitimate outcome of which is this sort of stuffed sausage of a man. Or the trouble may lie back of the school in the home where a child is always told everything to do, or not to do, where he is seldom left by himself to originate a line of action out of his own being. And I do not dwell on this feature of our educational problem in any spirit of complaining or discouragement, but look upon it rather as a necessary embryological phase, a "rest period," as it were, in our development, and rejoice in the many signs of a change from the passive, receptive, to a more active and productive type of education. All embryos from starfishes up, and possibly even educational systems, grow this way.

The dawn of active education in this country is patent to all in the practical applications which Herbart's doctrine of apperception and Fröbel's of self-activity are finding in our schools; in the rapid extension of the kindergarten, in manual training, in physical culture and, we may hope, in a kind of nature study that shall meet this requirement, and in the prominence now being given to independent work and to research in our colleges and universities. As Burnham puts it: "The great maxim of modern reform in education is the activity of the pupil instead of the didactics of the teacher. There are but two methods of instruction as regards the pupil, the active and the passive; as regards the teacher, the method of demonstration and the method of suggestion. *The active method of the kindergarten and the university should be adopted in all grades.*" (Italics mine.)

In proportion as education becomes thus active, nature study must take a prominent place in the curriculum. What else is there to work actively about except natural phenomena, responses to which have constituted the chief education of living forms from the protozoa up? And we could wish for nature study nothing higher than Fröbel's theory of education; as the "system of rules which may guide intelligent beings to the apprehension of their life-work and the accomplishment of their destiny." Says Superintendent Zech, describing what he actually saw in Fröbel's school: "Self-activity of the mind is the first law of instruction, and this so well adapted to the child and his needs that he learns as eagerly as he plays. What the pupils know is not a shapeless mass, but has form and life, and is, if at all possible, immediately applied in life."

What we need, then, in nature study, as in all other subjects, is a quality of knowledge which shall be alive and set the child's face right toward the universe, and thus form the foundation for active, helpful, living.

I supposed that all I had to do was to find a flag of truce somewhere and go over to the camp of the psychologists and get a clear analysis of knowledge which would be exactly what we need. And I asked the psychologists for a qualitative analysis of knowledge. Imagine my dismay when they, one after the other, looked at me in mild amazement and said that they did not understand what I meant. They had not heard of any such thing before. Did not any modern writer give clear distinctions between different qualities of knowledge? "No," I was told, "not if he knew what he was about."

However, a man must not be thin skinned with psychologists. It seems to be true that the books give us about as much light as to the kind of knowledge that makes a man, or helps to make one, as they do about the kind that makes a poet. But by dint of persistence and argument that there really is a kind of knowledge that lies like a burden on the soul, a kind of knowledge that makes tramps, vagabonds, common-place, stupid, uninteresting, good-for-nothing people (and recent studies have shown that our tramps are not foreign-born, as we are wont to think, but are the legitimate product of our own schools), and by insisting that there really is a quality of knowledge which forms a living center of interest, a wellspring of efficient activity and happiness, and by roundly abusing my psychological friends for being woolgatherers, I was rewarded at last by obtaining two beautiful analyses, whose chief service, it seems to me, may consist in supplying a fundamental rationale for nature study and for science teaching in general. The two analyses, though obtained by different methods, like two good chemical analyses, amount to much the same thing, and for sake of confirmation I will give them both.

Dr. Hall's qualitative analysis of knowledge is as follows:

Some fact in science is discovered, and a man casually reads about it or is told about it by a friend. He probably gains in this way a dim, far away notion, and soon forgets all about it. Second. His friend takes him into his laboratory, sets up the apparatus and demonstrates the discovery before his eyes. From this he gets a much clearer knowledge. His friend next places the apparatus at his disposal and lets him try the experiment himself; and his knowledge takes on a still stronger quality. It might be difficult now for him to forget the circumstances. Suppose, finally, the man works out the problem himself, devises, possibly makes his own apparatus, works days and nights in meeting difficulties and in overcoming obstacles, until, at last, he has his result definite and clear; until he has, himself, added a new fact to the sum of human knowledge. The discovery, the knowledge, has now become a living part of himself, an inspiration and a satisfaction as long as he lives.

Is not this analysis fundamental to our whole theory of education? Does it not reveal ways of suggesting subjects that may stimulate interest rather than dull it? The thought has an infinite number of practical applications and points out, along the line of Herbert Spencer's chapter, "Of What Knowledge is of Most Worth," the kinds of subjects that may awaken each pupil and set him to work. Suppose the discovery be something that may have an every-day application to life, a person, on merely reading about it, may have his interest so thoroughly aroused that he puts the truth into practice, uses it, and comes to know and value it. So, too, if the discoverer finds that his work may result in betterment of human life, the emotional tone, that imparts all value to knowledge, must be enhanced proportionately to the human importance of his discovery.

We may pass on to the second analysis, kindly given by Dr. Sanford. It has many features in common with Herbart's doctrine of apperception. In outline it is as follows:

All knowledge is at bottom an association of ideas. Each new idea depends for its quality upon the combinations or associations that it forms with other ideas already in the mind. Like a chemical compound, each bit of knowledge depends for its qualities upon the elements which enter into its composition. Now there are certain ideas of fundamental omnipresent, enormous, human importance. Spencer enumerates some of these in the order of their educational value as follows. 1. Ideas centering about direct preservation of self. These are known to be most keenly alive in young children. 2. Ideas connected with self-preservation indirectly, relating to food and the necessaries of life, also especially strong in childhood. 3. Ideas relating to preservation of the family. 4. Ideas pertaining to the State. 5. Ideas associated with one's pleasures and the gratification of his tastes. But if any object to Spencer on the ground of his utilitarianism, certainly Ruskin was an idealist, and even he says: "The first sure good consists in feeding people; the second sure good, in clothing people; the third in housing people, and the fourth in properly pleasing people with arts and sciences." If a new idea becomes associated or compounded with any or all of these great omnipresent ideas, it immediately begins to share their quality. Add to this one other consideration. It often happens that by simply putting two chemicals together in a test-tube no action takes place and we get no combination. We may have to bring them to a boil. So, as well brought out in Dr. Hall's analysis, where the man actually works out his problem, it generally requires human action, the higher the better, to unite into anything like a consistent whole the stock of mental elements that a man gathers into his life.

We thus touch the deeper biological foundations discussed in the first paper and find that only such knowledge as is associated with real human interests by vigorous human action is of the quality that makes the getting of knowledge worth the while. This is the kind of nature study that has made life worth living in the progress of the race, and the fundamental thing is the worth-whileness of the learning. Nothing else can take the place of this. Even the personification of drops of water and butterflies as Mr. and Mrs. this or that can effect no magical transmutation of dross into gold of human good. Nature unadorned is best adorned, and all the many attempts to pump up fictitious values only serves to effect in me a distinct feeling of nausea, and it is not uncommon to note a similar reaction in children.

The active method of nature study as related to the child may be fully discussed in a third and final paper of this series, in which it is proposed to review methods of elementary science instructions now in the field. In the above I have endeavored to prepare the ground for this by laying its deeper psychic foundations. It remains merely to add that we need this living spirit of science, of genuine research, of whole-souled, worth-while activity to leaven the whole lump of our public education. We need it as we need life itself. It must come to be the very breath of life of our educational system.

An intelligent teacher recently said to me that an attempt at this kind of nature study had revealed to her the fact that present cramming methods were doing all possible to make the children "helpless little imbeciles." This spirit of active, independent thinking and doing should be developed, of course, in relation to all the studies of the curriculum but the source and fountain head, of it all, the mother of the whole process and its continual nourisher and supporter must ever be Nature, "The old Nurse;" and its fundamental methods must be those she has seen fit to employ in the education of the race.

In what other subject do we have such an infinite array of problems touching human life on its every side? Where else do we find all these problems of life

Made fresh with every new blown rose,
Alive in everything that grows,

except in the continual flow of living processes about us?

Indeed, the difficulty in selecting material for nature study courses is one of *embarras de richesses*, and always will be. This brings us to a fundamental question, upon the correct answer to which depends the success of every attempt at nature study. It is the pedagogical question of the relation of teacher to pupil. At present the dry rot of our system consists in the impossible notion that the teacher must "know it all" and that education is "filling jugs." In the infinitude of nature this impossibility becomes self-evident, and the introduction of rational nature study must eventually cure this baneful malady.

How does it happen that so many of our leading biologists in this country are the intellectual children,—Brooks, Whitman, Mark, Smith, Birge, with a host of grandchildren now in nearly every prominent biological laboratory in the land,—of *Louis Agassiz?* On the one hand, no teacher ever had such power to set his pupils to work. On the other, we are told:—

> "His magic was not far to seek,
> He was so human."

The same is true of the great Carl Ludwig in physiology, and there is scarcely a physiologist from Siberia and Japan to America who has not been born under the spell of a like magic.

These great teachers did not give so much information, instruction, demonstration. Their highest service was to tell their pupils things that they did not themselves know, at the same time revealing the importance of finding them out. They gave, instead of stuff to be memorized, life works and life-long inspirations to do them. They were able to do this because their own minds were so keenly alive and active, and their whole personalities were so largely human and so thoroughly imbued with faith in the human value of truth.

In just this field, nature study, better than in any other subject in the curriculum the teacher may, and if he succeed, he must, assume this ideal relation toward the child. He cannot, if he cram up a mass of nature lore and compel the child to memorize it, that is intellectual murder; but if he inspires the child to go out into nature and learn something for himself and come back and tell it to his teacher and the class; and all the better, a hundred fold better, if it be something that the teacher did not know before. What an infinite delight it is for a child to tell a teacher something he did not know; to find out something, not set as a puzzle, the key to which the teacher holds, but something the teacher actually wants to know. Every teacher can give this delight to every child in his nature study class every day:—when he enjoys saying, "I don't know, but I wish you could find it out and tell us."

Important human values attach to all ethical and social relations, and an infinite number of these are associated with the nature in the midst of which a community lives. To do a thing in the best possible way is an ethical matter.

Hence competitive effort, as previously discussed, assists fundamentally in ethical culture. To plant a tree by the wayside is an ideally ethical thing, and it may be done with scarcely more than the turn of the hand of a child. To rear a beautiful flower may raise the ethical, as well as the social and æsthetic, tone of a whole street. The same applies to filling the country with our valuable native birds and utilizing all the resources of nature for the highest human good. On the other hand it is an ethical crime to destroy the goods of nature. In some of our States laws have been enacted which makes it a misdemeanor to allow weeds, insect pests or fungous diseases to breed upon a man's premises, because they may cause his neighbor serious loss. These laws will doubtless spread rapidly over the whole country, but we can have little hope of their effective observance until the knowledge of the phenomena of nature upon which they are based becomes common property of the community. We shall need to have these fundamental ethical relations clearly in mind for the final chapter in this series, but they are so patent that to develop them further is unnecessary. Suffice it to say that in our present exigencies of hoodlumism and juvenile crime and vandalism these ethical relations should be made discreetly prominent in all nature study courses.

In reality these fundamental relations, biological, intellectual, ethical and, we must add, religious, inhere together as inseparable elements in the formation of human character, and they can be discussed apart only as a matter of superficial convenience. It remains to point out a fundamental religious bearing that a rational nature study possesses.

The works of Drummond, Tyler and John Fiske have at last put a period to the so-called warfare between science and religion, and the philosophy of evolution has become one of the deepest sources of inspiration for religious character and life. In regard to formation of character in the individual as in the race the process of evolution may be safely taken to indicate the norm for development to follow. We have learned the futility, even the fatality, of cutting off the tadpole's tail to hasten development of the frog and we have begun to see its bearing upon educational mutilations of the human soul. Still we know that environment may hasten or retard the embryological process. In darkness or cold water or with lack of proper food the tadpole may live and die a tadpole. The Scylla of arrested development is as great, if not a greater danger, than the Charybdis of mutilation, and one of the most significant laws touching this subject is that of acceleration, and abbreviation of embryological stages in order to save time and bring the individual to a higher plane of organization. In other words, the plain duty of the educator is to see to it that environment is the best possible and favors the normal evolutionary process at every point. Where this is not done all sorts of malformations, arrests and even degenerations may result.

It is only in view of a more helpful theory that I incline to consider "nature worships," as we find them in savage races, and all the various "falls" from harmony and adjustment to nature as such malformations and degenerations. As such, they are not even embryological stages in normal human development, but something wholly aside, mere "stigmata." I cannot do better than sum up the argument in the words of John Fiske (Through Nature to God, p. 114), when he says: "But suppose we say that the ultimate goal of the ethical process is the perfecting of human character? This form of the statement contains far more than the other. (Which is that the end of the ethical process is the perfection of human happinees.) Consummation of happiness is the natural outcome of the perfecting of character, but that perfecting can be achieved only through struggle, through discipline, through resistance. It is for him that overcometh that a crown of life is reserved. The consummate product of a world of evolution is the character that creates happiness, that is replete with dynamic possibilities of fresh life and activity in directions forever new. Such a character is the reflected image of God, and in it are contained the promise and the potency of life everlasting."

Self acti

Character forms by active exercise of virtue, and in the nature about us we find infinite opportunities for such exercise. Moreover, nature points out the channels for its exercise and especially in living nature the continual, active flow of energy in growth and reproduction indicates in a thousand ways the directions it must take. The laws and forces revealed in nature are the highest and best that an omniscient Divinity could devise with which to create the happiness of his creatures. We cannot hope to discover any better ways, and in doing the work which God and Nature have set man to do, what higher religious development can a child attain than to become the reflected image of the Creator.

If Adam and Eve had done as they were told and had attended to their garden, we might be living in paradise, but they did not. If the children spring into obedience with the same divine command, we may be living in a paradise yet in a few years.

But the hereditarians say that Adam and Eve did not do it and their own fathers and mothers have not done it and the children will not do it. And the fatalists say "They cannot do it." And the pessimists say, "It would n't do any good if they did do it." I will consider the matter with the hereditarians and the fatalists and the pessimists with reference to practicable methods of work and especially from the point of view of the child's relations toward nature in the concluding paper. Adam and Eve may not have been sufficiently convinced of its worthwhileness and we may have benefited by their experience.

STUDIES IN IMAGINATION.

By Lillian H. Chalmers.

Communicated by H. Gale, Psychological Laboratory, University of Minnesota.

In one of Prof. Sully's "Studies of Childhood," 1896, p. 45, some statements were made which seemed to the author questionable. We fancied, judging from our own experience, that the statements were not true, and, accordingly, we issued a blank containing the questions given below, in order to ascertain the truth regarding these statements concerning doll play, and also to learn facts of interest along other lines of imagination. Some 1,800 copies were distributed, mostly among university students and public school teachers of Minneapolis. We received 282 returns. From teachers 70, female students 91, and male students 121. The teachers were all females.

Question blank for the study of imagination.

1. What literature did you enjoy most as a child and at what age?
2. What kind of literature do you approve for children and why?
3. Your age when you discarded dolls? Name any other child fancy that continued longer. (Male answers are as much desired as female.)
4. Why did you do so? (State any change in circumstances or yourself that may have been the cause.)
5. Is it hard now to realize or revive your feeling for your doll? Compare with some other games of your childhood, *e. g.*, horse, mud pies.
6. In what manner did you play with dolls? (In close imitation of real life, or merely as an object to dress and fondle?)
7. Did you keep the same doll throughout your childhood or did you have many dolls?
8. Have you preserved your doll?
    a. If so, why? (Has the beauty or value much to do with it?)
    b. If not, why?
9. If you conceive numbers or divisions of time in any form, if they have color or personality, please explain or draw and state how such forms originated, if you can.
10. If you were to call any numbers male or female, which would they be (would even ones be male?), and why?
11. Can you add or compute rapidly?
12. Do you visualize your addition, and if so how?
13. If not, how do you add?

I. In Doll Play.

The statement referred to above, made by Prof. Sully, is as follows: "Do any of us really understand this doll-superstition? Writers of a clear long-reaching memory have tried to take us back to childhood, and restore to us for a moment the whole undisturbed trust, the perfect satisfaction of love, which the child brings to its doll. Yet even the imaginative genius of George Sand is hardly equal, perhaps, to the feat of resuscitating the buried companion of our early days and making it live once more before our eyes. The truth is, the doll illusion is is one of the first to pass. There are, I believe, a few sentimental girls who, when they attain the years of enlightenment, make a point of saving their dolls from the general wreckage of toys. Yet I suspect that the pets when thus retained are valued more for the outside charm of pretty face and hair, and still more for the lovely clothes, than for the inherent worth of the doll itself, or what we may call the doll-soul which informs it and gives it, for the child, its true beauty and its worth." Sir John Lubbock is quoted as saying that the doll is a hybrid between the baby and the fetish, and that this hybrid is singularly unintelligible to grown-up people.

From the answers to questions, 3 to 8, we find that about 12% of females never cared for dolls. Of the 88% who did play with dolls about half did so till about twelve years old, while not more than one-fifth discarded them under nine. More than half kept up the doll-play longer than any other childish fancy. Other "fancies" mentioned as continuing longer are: 1. Those things relating to doll-play, as house, paper dolls, etc.; 2. Impersonating characters; 3. School; 4. Games; 5. Day dreams; 6. Mud pies. Some of these can scarcely be considered illusions at all, and none take such stretch of the fancy as the doll. Of those who discarded dolls at twelve or later, fourteen did so for shame, as against three from those who discarded them at nine or under. In all twenty-four discarded them for shame. The time of giving up a doll is marked in general by tendencies toward older things, such as reading, learning, and industry, and towards a more intricate kind of imagination, such as is employed in these occupations and in day dreams. The child instead of becoming less imaginative becomes more so; the imagination is less wild, hence less noticeable, but more complicated, hence of higher quality. The doll illusion, instead of being one of the first to pass, is the one above all others that holds the child till it begins to be a child no longer; then it passes suddenly, and in a sense completely, but not more so, nor as much so, as other illusions. Only those games which depend chiefly upon the imagination for their attraction can be classed as illusions along with the doll. All romping games, and those of chance and achievement partake, in part, of something enjoyed to a certain extent by any one. Hence we can fathom the feeling the child has for these; but the doll may seem so far removed from us, along with personified spools, etc., because it is purely a childish fancy and illusion. I say "may seem," for the answers to question five show that the majority of young women do not find it hard to realize or revive their feeling for their dolls, but easier than for any other childish fancy. Especially is this true of those who play with dolls as real children, mother them and love them as their own children. Many girls care for dolls chiefly to dress and carry round, not making any point of the doll's individuality or of their motherhood to them. These latter gave up dolls earlier and find it harder to revive their love for them. Of the 88% of our women who played with dolls 55% claimed to be able to revive their feelings, 51% as easily or more so than for any other childish fancy, 24% stating explicitly that they do so more easily. Only 19% of all the women can revive some other better, and only 20% of these can revive the doll love at all. Of those who played realistically 75% can revive their love. I should judge that the average age of the females might be between twenty-five and thirty, few being younger than twenty. Several say they would enjoy playing with dolls now, and one who did not care much for a doll when young said: "I confess that I have a longing now, occasionally, to have a doll, and even at forty, if no one knew it, I should really like a doll to hold and make believe with when I am very much alone."

Nearly 40% have saved their dolls, 10% more would have done so if circumstances had permitted. Only 7% saved them for their beauty or value, 12% merely as a relic, and 29% for the love they had and still have for them. Thus not a few, but many girls saved their dolls, and the pets when thus retained are valued scarcely at all for their beauty or clothes, but for the imagined worth of the doll itself. Again and again do they emphasize the fact that beauty and value have nothing to do with it. The dolls they have saved are anything but beautiful. Rather, as in childhood they cherished the noseless, wigless companion in preference to the nice new doll, so now they have saved from among all other childish treasures those that personal attraction has given the least right to remain. Only one states that she saved some other prettier doll than the one she played with most. Having younger children to play with lessens the attraction of the doll a good deal. It sometimes happens that the time of giving up a doll is marked by the transfer of the girl's affection from the doll to a new baby.

Those girls who play doll till twelve or later, in distinction from those who played only until about nine, are largely the same as those who finally gave them up under compulsion, who kept no other fancy longer, who can realize their feeling for them better than for other child fancies, who played in a realistic manner, had the fewest number of dolls, and saved their dolls because fond of them. They are also the women of more scientific taste, steady habits, and the least sentimental.

Though the men did not play with dolls till any considerable age, yet 20% did play with them, 15% of these till after the age of eight years and one boy played until fourteen with paper dolls. It is reasonably certain that this one kept no other fancy longer. He discarded his dolls for shame, and yet he cannot revive his feeling for them as well as for some other fancy. Of the boys using dolls two can revive their feelings quite well, but can revive that for other things equally well. Among the 36% who claim to have played with their dolls in close imitation of real life, are to be found all those who played until eight years and those who can revive their feelings. Four saved their dolls, not, however, for any fondness of the doll itself.

Conclusions: 1. The imaginative ideas and emotions in doll play can be revived by a majority of women and better than any other imaginative play of childhood.

2. With the majority of women doll play continues through childhood till the period of adolescence and longer than any other imaginative play of childhood.

3. About half of doll-players saved their dolls, and very many more saved them from affection or association than for their value or beauty,—something like forty to seven.

All of which conclusions are contrary to the quoted statement from Sully's "Studies in Childhood."

II. IMAGINATIVE ELEMENT IN CHILDREN'S LITERATURE.

Taking up questions one and two we find that the teachers are most careful about answering and the males the least so, as is shown in the following facts. It is hardest to classify the teachers' answers, to tell whether they would answer both questions the same. They say most on the subject, and though the great majority like and approve the same literature, many mention other literature also. They are the least precise as to what to read, but more precise as to the object of reading. Statistics on such questions as these are of only comparative value and our results are as follows:

TABLE I.

	Liked and now approve the *same*. Children's Literature.	Liked and now approve *different*. Children's Literature.	Doubtful.
Female: Teachers, 70,	47%	27%	25%
" Students, 91,	40%	30%	30%
Male: Students, 121,	38%	24%	36%

In spite of indications of lack of thought the males had quite a large proportion of their answers to the two questions decidedly different. This is partly explained by the style of literature which boys devour with so much interest, namely horrible, bloody, exciting stories. However much they enjoyed it, as young men they do not approve it. The female students show less difference between their childhood likes and their mature approvals. In regard to the teachers, I was impressed with the large amount they had to say as to what should be read and why. But I was surprised that it agreed as often as it did with what they did read, but then people's reasons are perhaps as much the result of their opinions as their opinions the result of their reasons, and the older the class of people the more set, perhaps, they become in their opinions. Moreover, there is some good in most any literature and people see the good in that which appeals to their taste. Thus it does not hold true as I had thought and as, I think, the usual *a priori* judgment would be given, viz., that mature judgment would go against the childish taste most often among the teachers, next the female students, and lastly the males.

Out of 282 persons, 121 of whom are males, the answers to questions one and two resulted as follows:

TABLE II.

KIND OF CHILD LITERATURE.	LIKED.	APPROVED.
Fairy Stories	38%	24%
Natural Stories (Real life)	34%	32%
Adventure	23%	12%
History	10%	22%

This table may seem contradictory to the statement already made, that more approved and liked the same than otherwise; but that it is not will be seen by further examination. There is a tendency among those who seem to have been most thoughtful to approve the realistic reading and not the ordinary fancy given to children, which is so easy to write and which they take to so readily. But because this kind has been used for children for a long time and they like it, the thoughtless naturally infer that it is the proper thing for them. Many thoughtful people also approve of it, for what seems to them good reason, but others think this style deficient, and have introduced a new idea, viz., that more pains should be taken with a child's reading, and it should be given something of more value than mere interest, something that would cultivate more talent than imagination or a higher type of imagination than that which has its aim in making as large a lie as possible.

The truth is many-sided. The reasons given for approving any kind of literature are real ones; the person who gives them sees one side of the truth—the side that appeals to him—and sometimes the very same reason is given for opposite kinds of reading, while more often the same kind of reading is given for opposite reasons. One thinks the child should be given reading along the line of its tastes and talents in order to cultivate those things in which it has most ability. Another approves giving a child what it is deficient in, to cultivate the weaker talents, and make an all-round character. A nnmber of persons advised letting children read "anything they liked," others "nothing at all." One approves vigorous imagination stories, another anything not exciting. One likes and approves humorous stories, and another melancholy ballads. One was especially fond of "Paradise Lost" when a child. One wishes to introduce a child as soon as possible to real life, another to keep him out of it as long as possible. I am convinced that one's own taste and disposition has the greatest influence on his judgment, he thinks that what would have been best for him would be best for all children. Very few seem to have thought that the kinds of literature adapted to different children might be as varied as the children. The results of further classification are given in the following Table III.

TABLE III.

	FEMALES.				MALES.	
	TEACHERS, 70.		STUDENTS, 91.		STUDENTS, 121.	
Child Literature liked best.	Natural Stories,	42%	Fairy Stories,	48%	Advent're Stori's,	40%
	Fairy Stories,	24"	Natural Stories,	36"	Fairy Stories,	23"
	Adventure Stor's,	13"	Poetry,	5"	Natural Stories,	12"
	History,	7"	Bible,	4"	History,	12"
	Poetry,	4"	History,	4"	Bible,	3"
	Bible,	3"	Moral Stories,	1"	Moral Stories,	3"
	Moral Stories,	3"			Science,	2"
	Drama,	1"			Drama,	½"
	Scientific,	1"				
Child Literature now most approved.	Natural Stories,	24%	Fairy Stories,	27%	Natural Stories,	26%
	History,	18"	Natural Stories,	27"	Fairy Stories,	20"
	Fairy Stories,	17"	History,	15"	History,	20"
	Adventure Stor's,	15"	Moral Stories,	10"	Moral Stories,	12"
	Moral Stories,	13"	Nature Stories,	5"	Adventure Stor's,	11"
	Nature Stories,	7"	Poetry,	5"	Nature Stories,	3"
	Science,	1"	Science,	4"	Science,	3"
			Adventure,	3"	Bible,	1"
			Bible,	2"	Drama & Poetry,	½"
			Drama,	1"		

TABLE III.—*Continued.*

Child Literature approved because cultivating.	Information,	41%	Imagination,	29%	Information,	32%
	Imagination,	22"	Information,	28"	Imagination,	28"
	Morals,	22"	Morals,	28"	Morals,	28"
	Fitting for Life,	8"	Fitting for Life,	7"	Fitting for Life,	7"
	Amusement,	5"	Amusement,	4"	Amusement,	3"
	To make observing,	1"	Memory,	2"	Memory,	2"
			Make observing,	1"		

Conclusion: The answers show that our informants do not value the exercise of imagination as highly from their adult standpoint as they experienced it in their childhood's reading.

In connection with the answers to an additional question as to the study liked best it appears that those who like and approve fanciful reading are generally those with a more literary taste, while the more practical people, that is, those who like mathematics and the deeper studies, see less value and pleasure in fanciful reading, but like something real. This relationship between literary studies and imaginative reading on one side, and between reasoning studies and real reading on the other is shown as follows.

TABLE IV.
Above Relationship.

		TRUE.	FALSE.	DOUBTFUL.
Female Teachers,	76.	43%	24%	32%
" Students,	62.	50%	21%	32%
Male Students,	97.	51%	16%	33%

Girls with strong mother instinct, as shown in natural and long continued devotion to a doll, generally prefer natural stories. Moreover, as might not be expected it happens that these same girls are the ones that most often prefer mathematics and show other evidences of boyish tastes, but who like girls better than boys.

III. NUMBER AND TIME FORMS.

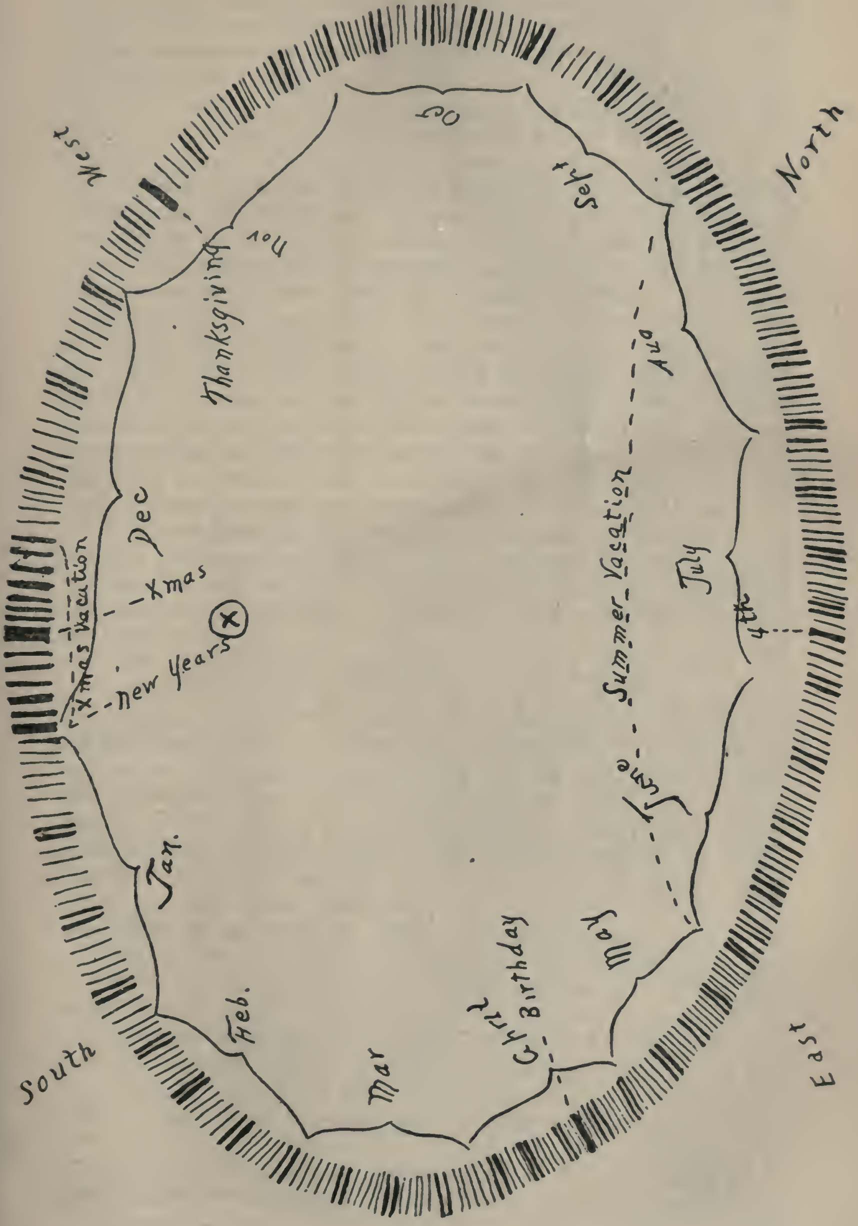
From the answers to questions 9 to 13 it is safe to say that the majority of people think number and time in some visual form. For we have found but one person who denied having such conception and who did not, after being questioned, admit that he did have such to some extent. In such cases, very likely, the forms originating in childhood have been forgotten. The answers on number and time forms are catalogued in the following Table V.

TABLE V.

	Have *Number* Forms.	Have Time Forms.	Have both Number and Time Forms.	See numbers in thinking them, though not in fixed positions.	Colors attached to Numbers or Time,	Numbers have personality.	DESCRIPTION OF FORMS.		REMEMBERED ORIGIN OF FORMS.
							FOR NUMBER.	FOR TIME.	
Female Teachers, 70.	14%	10%	4%	6%	4%	3%	Zigzag line. Horizontal " Ascending " Descend'g " Dots.	Circular. Clock face. Straight line. Curved line. Rectangle.	Cribbage, Authors. Lines like this, ||||||||,—from the way she was taught to count.
Female Students, 91.	19%	32%	12%	6%	3%	6%	Ascend'g line. Horizontal " Broken line to the right and then up.	Circular. Straight line. Undulating "	Clock. Almanac or calendar.
Male Students, 121.	17%	22%	9%	13%	6%	4%	Zigzag line. Right angle. Lines. Squares. Blocks. Ascending column. Cog wheel.	Circular. Clock face. Line. Rectangle. Calendar. Zigzag line. Irregular "	Arithmetic and Geography for circular forms. Arrangement of the alphabet in book.

It will be noticed that in the time forms the circular, under which is included the elliptical, is first, and the clock face has a prominent place. Doubtless the circular form came from some picture in a geography or other school book. Most people obtain their form when very young, probably when they first think of number and time. One man could date the origin of his time form at 10 years of age.

A greater variety of sources seem to have given rise to the number forms, yet they may all be traced to the method used in teaching or the idea in connection with which they were first thought of. Besides association, the number form may be determined in part by the taste of the persons for certain kinds of forms. I could not get much data throwing light upon this point, but Galton noticed a similarity between a person's writing and his number form. (See Galton: "Inquiry Into Human Faculty." p. 127.) One such remarkable form was, however, returned, which I have called a cog-wheel. The form is in general circular, but studded regularly with cogs, not sharp, but rather undulations. These are not all the same size, but go in groups of three, each three being the same except that which contains thirteen. Each number has its own cog, from 1 to 100, and the former repeats itself in every hundred. The owner of this arrangement is an inventor of mechanical devices.


West
North
Oc
Sept
Nov
Thanksgiving
Aug
Summer Vacation
July
4th
June
Dec
Xmas
Xmas Vacation
New Years
X
Jan.
May
April
Birthday
Feb.
Mar
South
East

The letters of the alphabet arrange themselves in forms in some minds. People who have no forms usually regard them as idiotic, while those who have them cannot see how any one can think without them. I have chosen my own time form as a good illustration of the elliptical form, and I can explain it more at length than any other in our collection. First of all, it is not correct, as I cannot make it so. To my mind it is an ellipse of bright spaces, placed horizontally in black space. There is nothing wrong to my mind's eye in placing March at one end, October at the other, with the Fourth of July and Christmas at the other extremes. But to place it upon paper without making some months disproportionately long taxes my ingenuity. All the days in the year do not appear to my mind's eye at the same time. Prominent days, Christmas and summer vacations are fixed in my picture, and the spaces between these points are filled in with days and weeks. November and January seem a little longer than most of the months, but December does not, although the relative positions of Thanksgiving and Christmas make it necessary for me to so draw it. I have attempted to show by the shading the comparative brightness as it appears to me. Christmas vacation is white and brilliant, and Christmas day is the brightest day of the year. The summer vacation has a sunny brightness, Saturday and Sunday are brighter than school days, and any special date set for pleasure appears in its proper place conspicuous in its brightness. November is the darkest month. The sound of the name has something to do with its brightness, as some words are bright or dark according to the letters of which they are composed. Each day of the week has its own shade of gray. The day begins at the top of the line, and any hour or minute in the day has its position, though I see no lines or letters, but only the shape of the divisions of time with their position and color. When thinking of the form in a general way I am placed within at ⊗. When thinking of the present time I draw near that point in the ellipse, within the ellipse if it is winter, without if it is summer, and view any other time from that standpoint. The form is in a horizontal plane, placed as shown according to the points of the compass. The reason for this comes from my early school life having been passed on the shore of Lake Pipin, Minn., which runs from N. W. to S. E. The size of the ellipse varies according to circumstances, but generally it seems the size of the Lake Pipin Valley. This valley also seems to give the general form, but I think some picture in my geography helped me to make it elliptical.

In some cases numbers present themselves to the mind with something of a character of good or bad, or even of personality.

A very large number of people have pleasant or unpleasant feelings towards many numbers that border on personification.

The coloring of numbers is more common, I think, than would be gathered from the answers, and depends largely upon one's general taste. In my own case my coloring consists of only black and white, which I ascribe to the fact that I am not fond of gay colors.

The teachers have fewer forms than the students, perhaps because they are older and less imaginative, or have given up their forms in calculating and have come to do it "mechanically," as they call it, thus gaining rapidity. For with the answers to questions 11 and 13 it appears that the use of the number form is not conducive generally to rapid calculation, though it does not appear to be as much of a hindrance as I had supposed. 14% add rapidly and visualize their addition (seeing the numbers but not necessarily following a number form). 23% add rapidly and do not visualize. 4% add rapidly and visualize with a number form. 8% add rapidly and visualize without the number form. Altogether 29% visualize their addition, while 15% of these do not add rapidly.

Forms among females are most common among those who take to mathematics and systematic modes of thought, or to art. Among the males they are about evenly distributed. Those persons who have number forms are likely to think in visual images.

IV. IMAGINATIVE SEX OF NUMBERS.

Question 10 appeals to some as the most idiotic question that could be asked by a sane person. Yet 118 persons out of 282 answered this question. Not that we suppose that anywhere near that number ever deliberately thought of such a thing before, but having the idea suggested, one kind of number strikes them as being more appropriately feminine or masculine.

Of 69 answers from females:

16 called even numbers male, and odd female;
53 called even numbers female, and odd numbers male.

Of the 16 who called even numbers male 10 gave the following reasons:

9 because even shows strength, and males are stronger;
1 because even is preferred, and males are preferred.

Of the 53 who called odd numbers male 25 gave reasons:

15 because even is preferred, and female is preferred;
1 because odd is preferred, and males are preferred;
4 because odd seems stronger, and males are stronger;
5 because odd is first, and males are first.

Therefore about two-thirds of the females who gave strength as the reason called even number strong. 94% of those who have preference for odd or even prefer even. 88% of those who founded their sentiments regarding the sex of numbers on a preference for either sex prefer female.

Of 49 answers from males:

22 called even numbers male and odd female;
27 called even numbers female and odd male.

Of the 22 who think of even numbers as male 11 give the following reasons:

1 because females are preferred, and odd is preferred;
5 because males are preferred, and even is preferred;
6 because even is stronger, and males are stronger;
1 because odd is more suited to females.

Of those calling even numbers female 15 give the following reasons:

7 because females are preferred, and even is preferred;
1 because males are preferred, and odd is preferred;
3 because odd is stronger, and males are stronger;
5 because odd is first, and male is first;
1 because even seems feminine.

Therefore two-thirds of those who give strength as the reason called even number strong. About 85% of those who have preference for odd or even prefer even. About 57% of those who founded their sentiments regarding the sex of numbers on a preference for either sex prefer female. The 5 men who called odd male, because first, show an exception to the rule that the preferred sex is even. Besides these main reasons the following have some special reasons: One male replies: "Myself is one, wife makes two." To another even numbers are colored and odd ones white or black, getting this from the use of a checkerboard. There is some tendency to consider the curved numbers female. In two cases the even are male because larger. In three cases odd numbers are male because it was the custom in games, or the boys were so designated in the roll call at school. In one case the digits are females, adding ciphers they become males.

Conclusions:—1. With a large majority the preferred[1] sex (slightly female with the males, and overwhelmingly female with the females) is attributed to the even numbers as being more easily understood, less obscure and distant.

2. The stronger sex is attributed to the even numbers as stronger.

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[1] The word "prefer" is used to mean either actual preference, or feeling of nearness toward, ability to comprehend, or affinity with.

BIBLIOGRAPHY.

Some of the main articles bearing on these forms of imagination are as follows:

HALL, G. S. and ELLIS, A. C. Dolls. *Pedagogical Seminary*, December, 1896, Vol. IV, pp. 129-175.
LOWE. Evolution as applied to children's reading. Education, Vol. XIX, pp. 486-494.
GRIFFITH. A course of reading for children. Education, Vol. XVII, pp. 65-69.
CONE. Children and Literature. Education, Vol. XVIII, pp. 365-369.
PHILLIPS, D. E. Genesis of Number Forms. *American Journal of Psychology*, July, 1897, Vol. VIII, pp. 506-527.
GALTON, FRANCIS. Inquiry into Human Faculty.
—— —— Mental Imagery. Popular Science Monthly, Vol. XVIII, pp. 64-76.
HORNBROOK, ADELIA R. Pedagogical Value of Number Forms. Educational Review, Vol. V, pp. 467-480
WHITING, MARGARET C. The Individuality of Numbers. *Pedagogical Seminary*, Vol. II, pp. 107-110.

HOW A MUSICAL EDUCATION SHOULD BE ACQUIRED IN THE PUBLIC SCHOOL.

By MAX MEYER, Ph. D., Fellow in Psychology, Clark University.

To what intent do we teach music in the schoolroom? Is it to enable every pupil to become a professional musician? Certainly not. Is music taught in the schoolroom because it answers the purpose of giving to the pupil as many opportunities as possible to develop the faculties of the mind, as we learn Greek and Latin merely for the purpose of mental training without any expectation of meeting any one to whom we may speak in Greek or Latin? Nobody has asserted, or probably will assert, that instruction in *music* serves this purpose. There is only one reason for teaching music in the schoolroom: to enable the pupil to enjoy music, to add to all that makes life worth living this one of the most noble sources of delight. And it is this capacity for enjoying the really artistic music that I mean by musical education.

Is it helpful for this purpose to teach the pupil who to play an artificially made instrument, or to use that instrument nature has given to him, his own voice, or to teach him musical theory? It is possible that it will help him to enjoy music if he is capable of playing an instrument by note. But to learn this requires so much time that the public school cannot afford this instruction, but must leave the pupil to get it for himself. What usually is done by the school is to let the pupils sing some songs and learn them thus by heart.

Perhaps it is not to be regretted that there is not sufficient time in the school for teaching the pupils to play an instrument. The majority of them would, in any case, remain bunglers, and, as every one is more or less inclined to think too highly of his own performance, would become accustomed to poor music and satisfied with it, at home and in the concert room too—a condition, of course, not favorable to the development of art. Instead of increasing the doubtful music of dilettantes a greater part of the public should be enabled to enjoy the works of the great composers when performed by a real virtuoso.

Still there remains the important question whether knowledge of musical theory can help one to enjoy music. Here we have to distinguish two sorts of enjoyment, the intellectual and the æsthetic. Intellectual enjoyment results from every mental process that attains its end. If we succeed in settling difficulties, in solving some problem or other, we are pleased; *e. g.*, if we succeed in recognizing a picture, until then unknown to us, as a "van Eyck," or in distinguishing a harmony we are listening to, as a chord of the Fourth and Sixth. Quite different from this pleasure is the æsthetic enjoyment that results from the perception itself, *e. g.*, from the inspection of that picture, whoever be its painter, an enjoyment that cannot be enlarged nor diminished by knowing its originator, any more than the euphony of a harmony can be altered by the knowledge that it is a chord of the Fourth and Sixth. This æsthetic enjoyment is the only one we have to deal with here, because the intellectual pleasure, depending indeed upon knowledge of musical theory, is not at all a particularly musical one, but belongs to any kind of mental activity.

Now, we have to question what are the psychological conditions of æsthetic enjoyment of music. It is not easy to answer this question. But few investigators can be found who have wrought with success in this special field of psychology—"tone psychology," as Prof. Stumpf has called it. Here are to be mentioned not more than four names, one of them very old: Pythagoras, the Greek philosopher (about 570-500), Rameau (1683-1764), Helmholtz (1821-1894), and Stumpf (born 1848). In addition may be mentioned Riemann (born 1849). Of course many others have contributed to the psychology of music; however, their work is of less importance and without any considerable influence upon the development of tone psychology. Especially the innumerable text books of harmonics are quite worthless regarded from a scientific standpoint. They contain but mere enumerations of harmonies and resolutions of discords used by certain composers. Though the description of facts is the task of science, the facts have to be described not each separately from the others, but each one as a special case under a general law. Such laws are scarcely to be found in those text books. The rules we find there are like grammatical rules. They seem to have been laid down for the purpose that exceptions may be noted too. But rules that admit exceptions can by no means be accepted as scientific laws.

We owe Pythagoras the statement of the law under which certain tones are related to certain others. In cases of simultaneous tones the relation may be called consonance, its absence or—with simultaneous tones—rather its existence in a less degree, dissonance. The discovery of Pythagoras was that the psychological relation to each other of any given tones can be determined quite independently of the ear, so that it can be predicted what psychological effect certain tones will produce. This effect depends on the simplicity or complexity of the ratio of the vibration rates, viz., of the numbers of vibrations made by the sounding bodies in a unit of time. However, Pythagoras did not distinguish in detail, as modern psychology attempts to do, the different kinds of psychological effect, using only those two quite general terms: consonance and dissonance. Nevertheless his discovery is the basis of every further investigation in the psychology of music.

After a torpor of more than two thousand years our science returned to a new life. In 1700 the French physicist Sauveur communicated to the "académie des sciences" a series of investigations upon sounding bodies. He gave this science the name acoustics. The further development of acoustics took place in two directions, one more physical, the other more psychological. We have to consider here but the latter.

Sauveur's investigations in acoustics were used by Rameau in his construction of a theory of harmony. This theory, published 1721, was as highly esteemed by some people as it was scorned by others. Rameau started from the fact that a sounding body generally causes us to hear a larger or smaller sum of pitches, partial tones, the vibration rates of which are to each other as 1:2:3:4:5. Now, any harmony may be apprehended, by identifying octaves, as a sum of partial tones belonging to a fundamental tone "1," that need not really be present in the harmony, *e.g.*, C in the chord c′–e′–g′, C=1, c′=4, e′=5, g′=6. Many of his contemporaries attacked Rameau's theory, since they misunderstood it, as if he had required that tone "1" be a real fundamental bass, whereas he meant by it only an ideal one. It is a pity that Rameau did not restrict himself to numerically describing the relations of tones as they are found in harmony and melody, but tried to explain those facts by hypotheses more or less metaphysical. That property of sounding bodies of producing partial tones can hardly be itself—as Rameau thought—the cause of the psychological effect of harmonies.

Helmholtz was less interested in the merely psychological problems than in the physical and physiological ones. So he particularly inquired into the physiological conditions of our auditory perceptions, nevertheless to the great advantage of psychology. Even tone psychology shows us how much the progress of psychology—though far from being identical with that of physiology—depends upon the latter.

It was Helmholtz, who caused it to be generally recognized that a compound air wave after reaching the ear must be resolved into a number of single stimuli, each of them effecting one of the simultaneously heard pitches. However the particular way in which Helmholtz thought this resolution of the air waves to take place, viz., by means of resonators, tuned fibres in the ear, cannot be any longer maintained, since it contradicts a great number of more recent discoveries. But there is no difficulty in explaining that resolution of air waves by the ear in another way,[1] so that we need no longer be content with the meaningless expression of former times, that the soul was able to distinguish and recognize the most complicated form of waves.

While Helmholtz's work had its center in physiology, Stumpf attempted from the merely psychological standpoint to penetrate into the secrets of auditory perceptions. Nevertheless his work is based upon the results of modern physiology and physics. The results of his researches are embodied in two volumes on "tone psychology" and in some smaller articles; while further contributions are to be expected.[2]

It is a matter of course that the problems there discussed belong to the first elements of tone psychology, and that therefore the outsider who wishes to know the final results of science is not much concerned in them. Nevertheless these investigations are of great value, since a scientific research that rushes immediately upon the final aims without having settled beforehand the important, although less interesting elements, ultimately can conduct but to a seeming success. It may be mentioned that Stumpf has shown that all the attempts hitherto made to explain physiologically or psychologically the relationship of tones in melody and the consonance or dissonance in harmony, including that of Helmholtz, are to be regarded as unsuccessful, and that for the present we must be content with the mere fact of relationship and consonance itself.

Of others who have contributed to the psychology of music I will mention, by the way, only Riemann, whose investigations in musical accentuation seem to be becoming influential in the further development of tone psychology.

After this digression, showing how little has yet been done in tone psychology, we may turn back to our question: what are the conditions of æsthetic enjoyment of music? Doubtless the potentiality of æsthetic effect of music is based upon the property of pitches of being related to each other in different rates, of being more or less consonant. This property has not yet been duly examined, as we saw, but so much is true, that with a quite inconsiderable exception everybody is endowed with the faculty of being affected by musical tones according to their relationship, so that the common expression, this one and that one has no ear for music, can seldom be regarded as justified.

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[1] I have shown this in my paper "Zur Theorie der Differenztöne und der Gehörsempfindungen überhaupt," Zeitschrift für Psychologie, Vol. XVI, pp. 1–34, 1898.

[2] C. Stumpf: Beiträge zur Akustik und Musikwissenschaft.

In accordance with this statement we find that every one, almost without exception, likes to hear single melodies, whether sung or played on an instrument. But in the case of polyphonic music, sonatas, symphonies, etc., we find many people saying they could not acquire a taste for this music. In order to understand this, we have to inquire after the psychological conditions causing the difference in æsthetic effect of music composed for a single voice and of polyphonic music.

Let us assume some one hears a sound consisting of ten tones. What then is the relation of attention to these ten tones?

Usually one takes for granted that our attention can be fixed upon one psychical content only, not simultaneously upon several ones. Although this in the strict sense of the word is wrong, it is right in as far as, lacking particular practice, we are unable to turn our attention equally to several things at the same time. Attention is usually fixed upon one psychical content in a high degree, upon some others but slightly, upon the rest of real sensations not at all.

The unpracticed hearer of these ten simultaneous tones has his attention drawn to only one of them, or, more exactly speaking, to only one pitch. Only one tone sensation possesses sufficient psychical energy to be marked as a certain pitch, all the others lack that energy. But the latter do not remain completely ineffective, but cause what is called the quality of the tone. Which of the ten tones thus overwhelms the others, does not depend upon chance, but upon certain, although not yet quite exactly known, conditions, of which relative intensity seems to be the most powerful one.

Now let us apply this to the hearing of music. Any one—supposing that he is among the slightly practiced average men—hearing a melody sung or played, with a not too complicated accompaniment, will fix his attention on the tones of the melody. The tones of the accompaniment he usually does not mark as pitches, but as a continually shifting quality of tone, belonging to the melody tones. Surely in this case the hearer loses a great deal of æsthetic enjoyment, this being considerably higher when the hearer is able to perceive the accompanying tones as pitches instead of as quality of tone. But the enjoyment of a piece of music still more complicated, *e. g.*, a sonata, is impossible at all to such a hearer, because, in this case, the æsthetic enjoyment is conditioned by discrimination of the single pitches.

We have, therefore, to look for means to help fix attention upon each several tone simultaneously. Then, what we called quality of tone partly disappears; and in its place there is a real plurality of perceived pitches. Only when all the pitches of simultaneous tones really are perceived, has music the power to affect the hearer by all its beauty, by its artistic structure ot auditory sensations in simultaneousness (harmony) and succession (melody). Although this division of the attention to each several tone very often is not possible at all because of the chord being composed of too many tones, it is an ideal to which we have to approach nearer and nearer.

Now, there are various ways to aid the discrimination of simultaneous tones on the part of those who are not so highly gifted as to be capable of giving a divided attention to simultaneous tones without much practice. We may let them listen to each voice of polyphonic music separately and thus commit it to memory. Then in the complete piece of music the different tones of each chord are nearly equally stimulating to attention, and it is not as easily possible for one of them to overpower the others and be the only one perceived as pitch, while the others remain unperceived as pitches and become effective only in the quality of tone.

To learn by heart the single voices is, however, hard work and takes much time. We have, therefore, to look for an easier method of enabling the hearer to turn his attention to the tones which will occur, by having him know what these tones are to be.

We may call in the aid of visual sensations. We might give the hearer the score, so that he can see at any time how many and which tones he will hear and thus be enabled to pay attention to them. But for this it is prerequisite to have learned to read the score. The great majority of men, however, having no sense of absolute pitch, notwithstanding a perfect knowledge of notes, are unable by seeing a certain note to reproduce an associated corresponding pitch. They are able to conceive a certain pitch only by selecting out of the notes the intervals. Under these circumstances one may think it well to give up the notes entirely and to compose a score of notations of intervals. But in this way a clearly arranged picture of musical forms can hardly be gained. Obviously it is preferable to arrange a picture by means of notations of musical phrases. The number of phrases is of course smaller than that of intervals. Moreover it is far easier—in spite or rather because of the greater complexity—to associate with a certain sign a phrase than a single interval.

A method similar to this has recently been adapted by Hövker, a German teacher of music. He has described his method in an interesting essay, entitled: "Die graphische Darstellung als Mittel der Erziehung zum musikalischen Hören."[1] In order to give his "pictures of musical forms" he keeps in the main the customary musical lines and notes, but rejects with good reason that great number of musical signs which are absolutely necessary for performing music but thwart the purpose of giving the hearer an easily readable programme.

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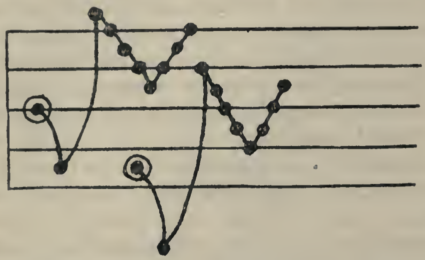
[1] Sechzehnter Jahresbericht über das Herzoglich Anhaltische Landesseminar zu Cöthen, 1898.

As a specimen of such pictures of musical forms the beginning of a fugue of Bach's is given here.



Hövker uses these pictures even at the first instruction in music in order to call the pupil's attention to the fact that every song, however small and simple it may be, is composed of partial tunes, of phrases. Each phrase is represented by a figure gained by connecting the heads of the notes by means of dashes. Thus the pupil is accustomed to look for the component parts also in the larger and more complicated compositions, and by so doing to cultivate his æsthetic judgment. But still more helpful than for distinguishing the single *successive* phrases are these pictures for clearly perceiving the structure of polyphonic music with regard to the *co-existence* of tones.

Hövker reports to us some instances which prove the value of his method. A slightly talented person, but one who had taken for several years regular instruction in singing, playing and theory, could not acquire any taste for sonatas, symphonies, and fugues, not being able to understand them. By the help of these pictures he very soon became capable of showing the theme on the picture of a fugue in three voices in whatever voice it was heard. Still more surprising are the results in persons who are not acquainted with musical notation at all, and therefore not capable of note reading. Usually after a short practice they become able to associate the single figure with the tune heard and to understand the structure of a whole piece of music by means of these pictures. So when hearing music they know by looking at the picture how to turn their attention in order to enjoy the music.

Thus there appears the possibility of enabling a majority of people to enjoy artistic music without the drudgery of acquiring a perfect acquaintance with musical notation. However, the use of such pictures, although not very difficult, requires some practice to be successful. Not likely to be considered by an adult as interesting in itself, this practice should be acquired during the school years.

I need not explicitly say that I do not reject instruction in singing and playing. But I do not grant that a man may be regarded as musically educated when having acquired only that technical skill. Doubtless it will be advantageous for every pupil to learn to sing and to play; and many better talented ones may acquire even thus a sufficient practice for æsthetic enjoyment of music. But the faculty of *enjoying* music by hearing is far more desirable than that technical skill in itself; and where only one or the other is possible, one should not hesitate to choose this æsthetic capacity.

The system as used by Hövker will not probably prove to be the best attainable. It is the first step on a way hitherto untraversed. But by introducing this system into the public school an opportunity would be given also for its improvement by experience. Furthermore it is often difficult to find out what melodious parts have to be regarded as psychological units and therefore to be represented by a separate figure. I hope that in this respect my own work of analyzing music into the smallest psychological units will prove to be helpful.[1] The application of the psychological theory of music to the practice of teaching is doubtless a promising field for the teacher who recognizes the necessity of improving the method of teaching music.

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[1] Elements of a Psychological Theory of Melody, *Psychological Review*, Vol. VII, No. 3, pp. 247–273, May, 1900.

RIGHTS OF CHILDREN; A STUDY IN JUVENILE ALTRUISM.

By **Will S. Monroe**, State Normal School, Westfield, Mass.

A sense of justice, crude and varying at first, gradually develops in the child; and, in facing the problem of the training of the social sense, the educator must distinguish between rights and indulgences. What are some of the rights upon which children insist; at what ages do they insist most strongly on their rights; do boys surrender their rights more readily than girls? Answers to these questions were sought from children themselves. The following story was told to 1,245 young children:

"Jamie's father gave him a dog, but Jamie often forgot to feed it and the dog cried at the door. Then Jamie's father took the dog and gave it to a kind little girl who lived down the street." Who had the best right to the dog—the father, Jamie, or the little girl, and why?[1]

The children tested ranged in age from 5 to 12 years. Special effort was made in this test to get the opinions of the youngest school children, in the belief that such expressions would not only indicate primitive proprietary notions but also indicate the spontaneous moral dispositions of young children. 70% of the girls and 57% of the boys thought that the little girl had the best right to the dog. The following are samples ot the replies taking this point of view:

Girl, 8 years. "I think the little girl had the best right to the dog. Why I think so is because the little girl was the last one he gave the dog to. And if you give a thing away you cannot take it back again."

Girl, 10 years. "I think the little girl had the right to keep the dog. Because she could go to the meat market and get some meat for the dog. May be the little boy lived too far."

Three reasons were offered in justification of this assumption. 1. The little girl fed the dog; the little boy had been so cruel as to neglect it, and by his cruelty he had forfeited his proprietary rights. The fact that 44% of the children take this view of the case weakens the position of current pedagogy that the children are by nature cruel. My own studies, as well as those of Professor Earl Barnes, clearly contradict this long accepted dogma. 2. Girls are by nature kinder than boys, say 8% of the boys and 17% of the girls; and, being naturally the more humane, they should have prior rights in the possession of dumb brutes. It is interesting to note that it is the girls themselves mainly who regard girls as kinder than boys. 3. The dog was given to her and therefore she had the best right to have him.

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[1] I am indebted to Professor Earl Barnes for the tests used in this study.

33% of the boys and 20% of the girls say that the father had the best right to the dog, the following being typical of the group:

Boy, 8 years. "I think the father had the right to the dog, because he had the dog and Jamie did not have to buy the dog and the girl did not have to buy the dog."

Girl, 8 years. "The father had the best right to the dog because he was the bigest and oldest."

These children base their judgments upon two facts: (1) The father had paid for the dog, and (2) the greater age of the father would enable him to make a more righteous disposition of the matter than either Jamie or the little girl. In this group we have represented the class of children who recognize wisdom as peculiar to age and extended experience.

A third group of children—represented by 10% of the boys and 6% of the girls—argue that Jamie had the best right to the dog. It was bought for him and given to him. The father had no right to take it from him. This position, strange to say, is taken by the older children. But the sympathy of the children for the suffering dog led most of them to form the opinion that whatever right Jamie might have originally possessed he had forfeited that right by his neglect. The opinions of the third group are represented by the following answers:

Boy, 10 years. "Jamie had the best right to the dog. Because when you give a thing away you can't take it back again."

Boy, 11 years. "Jamie had the best right to the dog. Because the father gave it to him and the father had no right to the dog."

The following story was dictated to 567 boys and 576 girls between the ages of 9 and 16 years: "Hattie Smith's papa was very rich, and bought her very many beautiful things. When Hattie was nine years old she went to live with her aunt Mary, who was very kind to poor people. One day when Hattie was at school her aunt gave her old hood to a poor girl. When Hattie came home she asked, 'why did you give my hood away? it was my hood, my papa bought it for me.' Her aunt Mary told her that her papa had sent her a nice new hood. But the next day she had to wear the new hood to school, and she sat next to a poor girl who wore her old hood." The children were asked to finish the story and have it end as they thought it should; and the manner in which they had the story end revealed the egoistic and altruistic tendencies of the juvenile writers.

The following endings of the story quite fairly represent the attitude of the children tested:

Boy, 13 years. "She asked for the hood after school, but the poor girl would not give it up. So they fought for it, and the poor girl won, so the rich girl had to wear the new hood all the time."

Girl, 13 years. "Both girls were at once friends, and now they wear the things alike and are happy. The rich girl has learned a lesson from her kind aunt Mary to give to the poor who cannot afford to buy nice things. I hope every child will learn a lesson from this."

Boy, 14 years. "She commenced to tease the poor girl, and the poor girl began to cry; this softened Hattie's feelings so that she made up her mind never to be selfish again."

Girl, 14 years. "She felt above the poor girl when she saw her with the hood on, but yet she was angry to think her aunt Mary had given it away, and so she took it away from her and went home with them both to her aunt Mary, and her aunt humbled her by making her give the new hood to the poor girl, while she had to wear the old one. 'Pride goeth before destruction, and an haughty spirit before a fall.'"

Although altruism triumphed, 46% of the endings were more or less dominated by egoistic impulses. 243 of the children simply represented Hattie in an angry, revengeful mood; 67 had her take the hood from the poor girl by force, and in this the boys led; 81 represented Hattie as persuading the poor girl to return the hood to her; 68 had Hattie go to the cloak room and exchange the new hood for the old one; 24 children represented her as taking the old hood from the cloak room without leaving the new one; and 48 of the children presented Hattie simply as uncommunicative and unsocial with the poor girl—"severely letting her alone."

Those who describe Hattie in a less selfish frame of mind—24% of the boys and 30% of the girls—represent the children in whom sympathy is more or less dominant. Hattie is represented as penitent for her selfishness by 252 of the children; 194 of the children picture her as happy to see the poor girl with the hood; and 164 represent her as not only kind to the poor girl, but as kind and thoughtful of poor children generally in her subsequent social intercourse with her schoolmates.

The egoism of the 46% of the children who represent Hattie as ungenerous and anti-social is clearly dominated by consideration of rights. Hattie owned the hood; it was her right to keep it if she wanted it; and its disposition in Hattie's absence without her knowledge and consent clearly violates the sense of justice entertained by these young moralists. However false their reasoning may be, their sense of justice is formulated and will not be altered until they are convinced of the rightness of the opposite procedure. Considering the limited range of experience of children, the sense of justice is singularly sensitive and susceptible of extended modification. But whatever they are forced to do, in opposition to what they consider their rights, must unquestionably delay the development of the social sense.

A movement which recognizes this pedagogic principle is the Junior Republic at Freeville, New York. It is an experiment in the education of personal character for social responsibilities. The impulse in which this pedagogic experiment originated was a desire on the part of a young philanthropist—Mr. W. R. George—to give some of the poor children in the slums of New York City a taste of country life on his farm at Freeville. During the hot season, ten years ago, he took 22 children in the country for a two weeks' outing. The next year his caravan numbered 210, and for the two subsequent years the number averaged something over 250. These brief summer camps were under the personal supervision of Mr. George; and besides the recreation and discipline he tried to give them some instruction in religion, patriotism, and certain simple industries.

In his management of the boys, Mr. George was impressed with three marked social characteristics: 1. The keen sense of justice shown by them in all matters of conduct and discipline. 2. The superior power which they possessed for controlling one another. 3. The excellence of their suggestions in matters touching the government and control of the boys. These convictions led him in the summer of 1895 to enlarge his own farm and to organize the boys into a republic with a civil and industrial society, with a congress, with civil and criminal courts, with police and executive officers, with a military organization and a prison, and with a currency of their own, and all the appurtenances of commerce. Mr. George is the self-appointed president of the republic and reserves the veto power, which he uses sparingly. The responsibility of the government rests upon these children of the slums. The constitution of the United States and the laws of the State of New York serve as models for the republic; but the legislative body enacts such laws as may be needed by the community, and enforces them by its own executive and judicial officers. The congressional term lasts only one week, and its representation, like that of the mediæval European cities, is by guilds. There are six industrial classes—farming, landscape gardening, carpentry, cooking, millinery, and sewing—and each has representatives in the lower house.

The boys now remain on the farm for two months during the summer; and self support, as well as self government, is one of the economic features of the commonwealth. When a boy arrives at the farm he is assigned work in one of the six industrial classes and he is paid in the coin of the republic in accordance with his efficiency and industry. Out of his earnings he must pay for his board and lodging. A little more than half the day is devoted to work, and the remainder to study and recreation. Here is an experiment in social growth of far reaching pedagogic import. The movement is yet too young to be judged by results; but the principle—self help and self government the larger actualization of the individual through social reactions—is essentially sane and praiseworthy.

The study of rudimentary society among boys made by Mr. Johnson indicates quite clearly parallelism between the genesis of the social evolution of the child and of primitive man. The McDonough Institute is a farm school for orphan boys, and is situated in Baltimore. John McDonough gave eight hundred acres of land to the city of Baltimore in trust for poor boys who should be sheltered and educated at the farm until they reached the age of seventeen years. Mr. Johnson conceived the idea of studying the agrarian customs and institutional instincts of these boys, of which, at the time of his study, there were fifty. He found that at the McDonough School, land tenure, legislation, judicial procedure, and industry were all of a primitive character.

I. The land tenure included: (1) A system of common landholding. Each boy had an equal share to the land and whatever was found on it, such as rabbits, squirrels, etc. There was an annual re-distribution of land. A boy set a rabbit trap in a certain place. No one could remove it for that year; but the next year it could be replaced by another boy's trap. In this we have (2) a system of temporary individual ownership. A rabbit trap was durable and would last many years. We can readily see that it would be easier for one boy to re-set his traps than for another boy to remove it and substitute one of his own. This went on many years and led to (3) a system of permanent individual ownership. Certain boys on leaving the school bequeathed their lands to favorites and it happened that after a time all the land was in the hands of three boys, and we have (4) a system of land monopoly. The other forty-seven boys demurred, and land monopolists gave up some of poorest land.

II. The legislation of the boys was extremely primitive in character. It resembled the village council. Laws were made only when necessary. Thus they fixed the date for the opening of the harvest, because owing to the selfishness of a few, the main part of the produce had come into the hands of a few.

III. Their judicial procedure, Mr. Johnson concludes, resembles savages. They left the result of a disagreement entirely to chance or luck. Any neglect of duty which inconvenienced the others was immediately punished. They also appealed to bystanders to decide. The whole body of the population declared by word of mouth the right or wrong of the matter.

IV. In the matter of money as mediums of exchange they used eggs, cherries, raspberries, grapes, etc. The transactions became so complicated that the boys lessened the number of payments by verbally transferring their claim from one to another. This embodies the idea of the negotiable note. The extravagance of some of the boys led to the establishment of savings banks. For example, a boy found it impossible to save any amount of money while it was in his own possession, so he confided it to a friend; thus he always seemed poorer to himself than he really was.

These adolescents, as Mr. Johnson points out, in the evolution of their social, political, and economical notions, are repeating the history of their ancestors and of the race itself. "As in the changes of the egg, the embryologist recognizes certain rudimentary features which disappear before both, so the sociologist of human institutions may discover in a company of lads not only the rudiments of primitive society, but the germs of its development. Every schoolboy in his upward way to real manhood represents the evolution of a primitive savage into a civilized being; and every school reproduces the developmental process of human society into some of its most interesting aspects."

BIBLIOGRAPHY.

COMMONS, J. R. The Junior Republic. *American Journal of Sociology*, Chicago, November, 1897, and January, 1898, Vol. III.

JOHNSON, JOHN. Rudimentary Society Among Boys. Johns Hopkins University Studies, Vol. II, No. 11. Baltimore, 1884. pp. 56.

MONROE, WILL S. Die Entwickelung des sozialen Bewusstseins der Kinder. Sammlung von Abhandlungen aus dem Gebiete der pädagogischen Psychologie and Physiologie. Berlin, 1899. pp. 64-69.

SCHALLENBERGER, MARGARET E. Children's Rights as Seen by Themselves. *Pedagogical Seminary*, October, 1894, Vol. III, pp. 87-96.

SISSON, GENEVERA. Who has the Best Right? Barnes's Studies in Education. Stanford University, 1896-97. pp. 259-263.

SPENCER, HERBERT. The Rights of Children. Holbrook's translation of Bertha Mayer's Aids to Family Government. New York, 1879. pp. 169-182.

WIGGIN, KATE DOUGLAS. Children's Rights; a book of nursery logic. Boston, 1892. pp. 235.

HOME READING OF SCHOOL CHILDREN.

By **Arthur P. Irving**, West Boylston, Mass.

In order to ascertain what my pupils were reading outside of school I made, not long ago, inquiries in each grade from the fourth to the first year in the high school. This inquiry was made during the fall term, so the children had been in the schools from three to nine years. Each pupil was asked to write a list of the books he could remember having read, to give also the name of the author, and to indicate the book he liked best. About 600 children made such a list. Only 6 failed to do so. Of two boys in the 6th grade one said he had so much to do that he did n't get time to read, the other said, "I reads the murders in the papers." Two boys in the 8th grade had read several books but could n't remember the names. A boy and a girl in the 9th grade said they did n't like to read books.

The following is a summary of the 7th grade lists: No. of pupils 121; boys 61, girls 60, ages 11 or 12 years. No. of different titles given 676; by boys 401, by girls 341. The author was mentioned 72 times.

Largest	number	of books	mentioned	by a boy,	31,	by a girl	27
Lowest	"	"	"	"	1,	"	4
Average	"	"	"	"	11.4,	"	11.6

The girls seem to have read more, but a less variety.

Of the 676 titles 504 were given by only one child each or, in other words, only 122 were read by two or more children.

Some of the more commonly read books (included regular readings of Youth's Companion, St. Nicholas and a few others),—

Youth's Companion,	read by	40	boys,	33	girls,	total	73
Robinson Crusoe,	"	32	"	26	"	"	58
Uncle Tom's Cabin,	"	15	"	20	"	"	35
Black Beauty,	"	4	"	26	"	"	30
Five Little Peppers,	"	4	"	13	"	"	17
Longfellow's Poems,	"	5	"	9	"	"	14
Little Women,	"	—	"	15	"	"	15
Rip Van Winkle,	"	6	"	6	"	"	12

Twenty-three books, among which are Old-Fashioned Girl, Peck's Bad Boy, Swiss Family Robinson, Tom Sawyer, Arabian

Nights, Little Lord Fauntleroy, Pilgrim's Progress, and various fairy stories, had from five to nine readers each. The remaining 141 books had from 2 to 4 readers each.

In reply to what books they liked best, 53 titles were given. Of these—

Youth's Companion	was given by	9
Uncle Tom's Cabin	" "	5
Five Little Peppers	" "	4
Preferred by one each,		43

Among the last were Around the World in 80 Days, Boys of '76, Optic's stories, Alger's stories, Wild West, Life of Washington, Misunderstood, Little Nugget, Ragged Dick, and Syble's Influence.

The girls had read many of Alcott's, Pansy's and other well known books for girls, a large amount of fairy stories and many odds and ends. The boys seem to have run to adventure stories. Many had read girls' books and anything else they could find.

In the 5th and 6th grade lists are mostly children's books, but Uncle Tom's Cabin had been read by 30 in grade V. In the 8th grade the lighter vein of literature begins to creep in, but, as a rule, only one or two books in a list. In the 9th grade and first year of the High School lists the titles of the juvenile books are, for the most part, forgotten, but the authors of these books are given. In these lists we find the more common books read by adults.

A great many in all the grades testified that they had read many more than they could remember. The boys were very careful to cover up their Jesse James literature. (I happen to know that business in this sort of reading matter is good in this town.) A typical list by a boy of the 7th grade—Huy Harris, Julian Mounator, Dan the News Boy, Three Scouts, Cudjoe's Cave, Travels in the Mountains Series, Travels in the Gunboat Series, Travels in the Prairies Series, Wild West, The Mountain Cave, Gold Magnet, Robinson Crusoe, Cruises of the Snow Bird, Oscar Peterson, Pocket Rifle, Tom Sawyer, Adventures of Huckleberry Finn, Adventures by Land and Sea, Raft Mates, Canoe Mates, Camp Mates, The Deerfoot, Log Cabin, and Afloat series, All Aboard for Lakes and Mountains and for Sun Rise Land, A Trip to Africa, Silver Medal, Soldier Boy.

A list by a girl in the 7th grade—Alice's Adventures in Wonderland, Capt. January, Marie, Melody, Narcissa, Frank Fowler the Cash Boy, Victor Vane, Tony the Hero, Tom Temple's Career, Tan Pile Jim, My New Home, Uncle Tom's Cabin, Jolly Good Times Series, Charlie Bell, Faith Gartney's Girlhood, The Purdy Series, by Sophie May, When I Was Your Age, Five Little Peppers Series, Polly, Palace Beautiful, Nan, Rolfe House, Dear Daughter Dorothy, Robin's Recruit, Six Little Rebels, Doctor Dick, Beautiful Joe, Queen Hildegarde Series, Little Women, Little Men, Joe's Luck.

This girl is a bright pupil. She says she picked these books out herself mostly from the public library. She owns very few of them.

Here is an unusual list by a boy of 14 years in the 8th grade —Blue Ribbon, History of Scotland, History of France, Bible and Modern Discoveries, Fred Markham in Russia, Zig-Zag Journeys in Classic Lands, Zig-Zag Journeys in Northern Lands, Zig-Zag Journeys in Antipodes, 20,000 Leagues Under the Sea, Ants Bees and Wasps, Rob Roy Canoe on the Baltic, American Wonderlands, History of the English Language, At War with Pontiac, History of Greece, Origin of Species, Natural History of Selborne, Environs of London, Environs of Paris, Ten Great Religions, Story of the New World, Geography of the Heavens, The Solar System, Geological Excursions, Heroes of the Dark Continent.

At the other end of the scale is this list by a girl in the 9th grade—Witch Hazel, Lena Rivers, Thrice Wedded, Esther the Fright, The Gypsy's Daughter, Broken Wedding Ring, and others she could n't remember. This girl owns none of these books. She "just ran across them."

After studying these figures and lists it seems plain that there is far too much aimless, wasted reading among our young people at the very age when right example is so important. Something can and must be done to direct this work. The home, the school and the libraries, both Sunday School and public, ought to give this matter serious and scholarly consideration. Less reading matter, but of the right sort, is needed. Children need to own their books for reading and re-reading. Discriminate and tactful direction of the reading of children by those in charge is of the greatest importance.

BOOK NOTES.

G. S. H.

Report of the U. S. Commissioner of Education. Vols. I–II, 1897-98. Washington, 1899. pp. 1280.

These ponderous volumes are on the whole, the best that have ever proceeded from the Bureau of Education. In his introduction the commissioner follows the plan of the *Pedagogical Seminary* by briefly summarizing the scope of each of the long articles that follow. The History of the German School System is a valuable treatise in itself, especially when supplemented as it is by chapters on Education in Great Britain, and Ireland, Canada, British Provinces and Central Europe. Other interesting sections describe Education in the Argentine Republic, Uruguay and Brazil, Cuba, Porto Rico and the Philippines, the Public School and the Public Library, Physical Training, Summer Schools in England, Scotland, France and Switzerland, Child Study, etc.

Principles and Method of Teaching Derived from a Knowledge of the Mind, by JOHN W. DICKINSON. Emerson College of Oratory, Boston, 1899. pp. 209.

The author, long the head of the public school system of Massachusetts and fonder of his philosophy than anything else, here prints it after many years of incubation and lecturing to teachers. It is better on the whole than many expected, and is essentially a treatise on the philosophy of the mind with very little, directly or indirectly, about teaching in it. It moves in the sphere of definitions, classifications, terms and tabulations. It is written with such care and so high a sense of the importance of the work that criticism is painful and almost impossible, but when one forces the mind through its desiccated sentences, and reflects what kind of a book might have been written on the subject, the quality of it appears in a striking light.

Edward Thring: Life, Diary, and Letters, by GEORGE R. PARKIN. The Macmillan Co., New York, 1900. pp. 518. Price, $2.00.

Thring was certainly the most original and striking figure in England in the schoolmaster world of his time. His defiance of tradition, and his life-long fight against current tendencies in education which were strongly intrenched in the most conservative of all countries save China, ensured antagonism, while his plain self-sacrificing devotion to work, and his many innovations, made him many ardent friends. The letters, which constitute so large a part of the book, are amazingly frank and interesting.

Life and Times of William E. Gladstone, by JOHN CLARK RIDPATH. The Jones Brothers Publishing Co., Cincinnati, 1898. pp. 639.

This is an unusually elaborate and carefully prepared story not only of Gladstone's life in its narrower relations, but of the great events in English history in which he was an actor. It is a subscription book, and illustrated by perhaps a hundred interesting cuts.

Cuore: An Italian Schoolboy's Journal, by EDMONDO DE AMICIS. Translated by Isabel F. Hapgood. Thomas Y. Crowell and Co., New York and Boston, 1887 and 1895. pp. 326.

Eight or ten letters a month during an entire school year, which purport to have been written by an Italian schoolboy, but evidently were written by a mature and cultivated man seeking to put himself back into his school days, constitute this book. The favorite headmaster is an ideal teacher, and his morning talks on current events are full of wisdom and patriotism. There is less said of the actual studies, but the character of many of the boys stand out from these pages in very clear relief, and the out-of-school events, like fights, soldiers, accidents, home incidents, and excursions, present a most attractive as well as a vivid picture of Italian school life.

Abbottsholme, by CECIL REDDIE. George Allen, London, 1900. pp. 640.

We have here at last an exhaustive history of this unique and new foundation previously mentioned in our pages. It was founded in 1889, and is dedicated to Principal Reddie's teachers, colleagues, helpers, and to the graduates of the school. Besides his own portrait and that of Dr. Lietz, thirty other full-page cuts illustrate plans of the building, grounds, the outdoor occupations of the boys, etc. The author has not scrupled to print various criticisms from distinguished French, German, and other visitors.

Educational Reform: The Task of the Board of Education, by FABIAN WARE. Methuen & Co., London, 1900. pp. 139.

We have here a valuable characterization of present conditions, recent changes and tendencies in primary education in England, with chapters on higher technical and agricultural education, board organization, teachers, registration, etc.

Leçons d'Anthropologie Philosophique, ses Applications à la Morale Positive, par DANIEL FOLKMAR. Schleicher Frères, Paris, 1900. pp. 336.

The author, a former student at Clark University and later Lecturer on Sociology at the University of Chicago, and last year Professor of Anthropology at the new University of Brussels, presents ten lectures he there gave on the end and task of philosophical anthropology, its dimensions, the classification of human activities, methods and matter, critique, race, individual, primary and secondary activities, synthesis and hypothesis, and applied anthropology as a positive system of morals.

Colonial Civil Service. The Selection and Training of Colonial Officials in England, Holland and France, by A. LAWRENCE LOWELL. With an Account of the East India College at Haileybury (1806–1857), by H. Morse Stephens. The Macmillan Co., New York, 1900. pp. 346.

Thoughtful men agree that the United States should establish a good civil service in the Philippines, and with this in view the present work has been composed. It deals with the history of recruiting methods, with the various items of examination, gives a full description of the colonial school in France, and discusses the possibility of a special college here fully recognizing that the English system can never be adopted in this country.

Essays on Social Topics, by LADY COOK. Vol. I, pp. 284. National Union Publishing Company, London.

Nearly all Americans whose memory goes back twenty years will recall Victoria Woodhull, concerning whom much was said in the papers in connection with Theodore Tilton and others at the time of the Beecher trial, and her younger sister, Tennessee Claflin. The latter, it will be remembered, married an English nobleman. Both held and advocated in the press and otherwise very advanced views concerning the sphere and liberties of women. This book contains over thirty papers by the younger of these sisters on a wide variety of topics, which are full of the old spirit of liberty.

An Ethical Sunday School: A Scheme for the Moral Instruction of the Young, by WALTER L. SHELDON. The Macmillan Co., New York, 1900. pp. 206. Price $1.25.

The author, well known in ethical culture and free religious circles, attempts to describe the system he has been working out in his own St. Louis Church. He describes a religious service for the young, the contrast between his and the conventional Sunday School, the way they study the Bible, habits, the home, the life of Jesus for the young, duties to self, and basal religious beliefs. There is much that is very suggestive in the book, but the scheme seems to the writer to lack cohesion because not based upon any definite conception of the nature and needs of youth and childhood.

One Year of Sunday School Lessons for Young Children. A Manual for Teachers and Parents, by FLORENCE U. PALMER. The Macmillan Co., New York, 1900. pp. 226. Price, $1.00.

These lessons for young children are on good cheer, obedience, Easter, readiness, service, the church, sabbath, loving care, let others be first, and Christmas—so subdivided as to have one topic and one illustration and perhaps a song for each Sunday in the year. The work appeals to the writer of this notice as an admirable illustration of current methods better adapted within its modest sphere for effective work on its premises than any he knows, but he believes the premises and current methods to be wrong.

Bible Stories, by RICHARD G. MOULTON. Old Testament. pp. 310. New Testament. pp. 130. The Macmillan Co., New York, 1899.

These two volumes of stories are intended as a ground plan of Bible history. There is nothing to insinuate any doctrinal instruction, and these are introductory to the author's other larger and better known Bible Stories.

Christian Mysticism, by WILLIAM R. INGE. Charles Scribner's Sons, New York, 1899. pp. 379.

These eight lectures describe the mystic elements in the Bible, mystic Platonism east and west, practical and devotional, and finally nature mysticism. Interesting appendices are devoted to the Greek mysteries, the deification, the Song of Solomon.

Faith-Healing and Christian Science, by ALICE FIELDING. Duckworth and Co., London, 1899. pp. 214.

After distinguishing at great length between Faith-Healing and Christian Science, the author describes briefly a number of hysterical epidemics, such as the "shakers," "jumpers," "black death," "St. Vitus dance," "tarantism," etc. This is followed by a section on mental therapeutics, and another on testimony.

Christ in Creation and Ethical Monism, by AUGUSTUS H. STRONG. The Roger Williams Press, Philadelphia, 1899. pp. 524.

This is mostly a republication of papers from various periodicals. The work is more or less autobiographical, and consists of a series of guesses at truth. God's self-limitation, modern tendencies in theology, fall and redemption, history of the doctrine of state and church, decrees, qualification for the ministry, Renan, Finney, resurrection, eternal punishment, are the chief topics discussed.

The Great Law, by W. WILLIAMSON. Longmans, Green and Co., London, New York and Bombay, 1899. pp. 431.

This is a study of religious origins and of the unity underlying them. The chief topics treated are symbolism, the birth of the Saviour, death, resurrection, the ark in its various aspects, solar symbols, tree and branch sacraments, blood covenants, trinities, early races, ideas of God, modern standards of conduct, solar myths, second birth, and sacrifice.

The Shorter Life of D. L. Moody, by PAUL D. MOODY and ARTHUR P. FITT. Vol. I. His Life. pp. 124. Vol. II. His Work. pp. 122. The Bible Inst. Colportage Association, Chicago, 1900.

These two paper booklets give very interesting accounts of this great evangelist and his work from boyhood to his death. They are illustrated.

Experimentelle Beiträge zur Lehre vom ökonomischen Lernen, von LOTTIE STEFFENS. Zeits. f. Psy. u. Phys. der Sinnesorgane. Sonder-Abdruck, Bd. 22. pp. 321-382.

The author notes on various persons the shortest time required to learn lines of well known verses under various conditions, and by a very ingenious graphic method shows the errors most frequent. The work is too technical to be fully described, but its importance for the psychology of education is very great.

Die Lehre von den Stufen des Unterrichts bei Johann Friedrich Herbart, von NICOLAS TONTSCHEFF. O. Schmidt, Leipzig, 1899. pp. 57.

In this dissertation we have an admirable precise statement of the Herbartian studies with special consideration of the debated points, the application of the doctrine and its nature.

Interest in Its Relation to Pedagogy, by WILHELM OSTERMANN. Edited by Edward R. Shaw. E. L. Kellogg and Co., New York and Chicago, 1899. pp. 150.

Ostermann's monograph on this subject is probably the best on Herbartian lines, and it was a happy thought to translate it into English. A few notes with more modern references are added.

Essays on the Foundation of Education, by J. GODRYCZ. Lawrence and Van Buren Printing Co., Lansing, Mich., 1900. pp. 168.

These papers are very general discussions of intellectual, religious, moral and physical education; methods of teaching history; and international and civil law. The papers are interesting, but the author does not seem to have felt it necessary to study recent works on pedagogy.

Das Pathos der Resonanz, von OTTO LYON. B. G. Teubner, Leipzig, 1900. pp. 202.

Under this quaint title modern art, genius, and the relations between individual and social philosophy, are discussed.

Handbook of British, Continental and Canadian Universities, with Special Mention of the Courses Open to Women, Compiled for the Graduate Club of Byrn Mawr College, by ISABEL MADDISON. The Macmillan Co., New York, 1899. pp. 174.

This tasteful second edition might be called "The Woman's Minerva of European Universities." The information concerning each is ample.

Lectures, by JOHN L. STODDARD. Balch Brothers Co., Boston, 1898.

In ten volumes this well known lecturer publishes his material and many hundred of his best illustrations at the rate of from one to three on every page. Those who have felt the charm of his lectures will find the same in these tasteful volumes. Mr. Stoddard has always had a fine eye for artistic scenes, and in these volumes has left his monument.

The Story of Nuremberg, by Cecil Headlam. J. M. Dent & Co., London, 1899. pp. 303.

This is an unusually interesting and copiously illustrated work and in some respects a model guide book. The chapters on Albert Dürer, on Hans Sachs, and especially on the great national German museum with its over eighty rooms, a vast pedagogical monument in the larger sense of that word, are of rare interest.

Hawaii and Its People: The Land of Rainbow and Palm, by ALEXANDER S. TWOMBLY. Silver, Burdett & Co., New York, Boston, Chicago, 1899. pp. 384.

The writer has sought to present a history of Hawaii for young readers both reliable and interesting. The author spent six months in the islands by way of preparation, and has devoted a generous portion of the book to the interesting mythology of the natives. Two or three score of illustrations add materially to the interest of the book.

Music and the Comrade Arts: Their Relation, by H. A. CLARKE. Silver, Burdett & Co., Boston, New York, Chicago, 1899. pp. 128.

The writer sought to present the mutual relations of various arts and particularly their connection to science. Although based on the latter, its higher forms are subject to æsthetic law, which psychology may some time formulate. The one unifying principle of all art is form.

Richard Wagner Der Dichter und Denker, von HENRI LICHTENBERGER. C. Reissner, Dresden und Leipzig, 1899. pp. 571.

We have here a comprehensive account of Wagner's childhood and youth, his first opera, Rienzi, his experience in Paris, his life in Dresden where his reform ideas took shape, and where the Flying Dutchman, Tannhauser and Lohengrin were written, and his revolutionary scheme culminated. The third book is occupied with his exile and the triology, and finally his work in Beyruth is described. It is the best and most comprehensive of the Wagner literature.

Richard Wagner als Erzieher. Von ALEXANDER WERNICKE. Langensalza, H. Beyer u. Söhne, 1899. pp. 128.

This booklet is made up of pleasing and rather light chapters on the education of the personality by means of art, the nature of the music drama and its historical necessity, the personality and world view of Wagner and his presentation of it in art.

A Hundred Fables of La Fontaine, with Pictures by PERCY J. BILLINGHURST. John Lane, London and New York, 1900. pp. 202.

This is an elegant though inexpensive edition done into English verse, each fable occupying a page and faced by a full page illustration.

Handbook of Domestic Science and Household Arts for Use in Elementary Schools, by LUCY L. W. WILSON. The Macmillan Co., New York, 1900. pp. 407. Price, $1.00

Here we have a really good book upon this subject adapted for use as a teacher's manual. The first chapter considers the house and home and next the kitchen. Miss Marlatt contributes an interesting chapter on starchy foods; Mrs. Wilson on foods in general, cooking, drinks, with an advanced course. There are special chapters on fish, oysters, etc., the dining room, bread, pastry and cake, bed room, laundry, household pests, cleaning, mending, and sewing.

Abraham Lincoln. By CARL SCHURZ. *The Gettysburg Speech and other Papers*. By ABRAHAM LINCOLN. The Chautauqua Press, New York, Cleveland and Chicago. pp. 100.

This, with its testimonies by Emerson, Whittier, Holmes and Lowell, makes a convenient school and hand book.

Songs of All the Colleges, Including Many New Songs, by DAVID B. CHAMBERLAIN and KARL P. HARRINGTON. Hinds and Noble, New York, 1900. pp. 218.

This is an attractive volume and is to be followed by four others on the same plan and price, devoted respectively to northern, southern, western and eastern colleges.

The Red Cross in Peace and War, by CLARA BARTON. American Historical Press, 1899. pp. 703.

This is an interesting and copiously illustrated subscription book giving in a very interesting way the work of this beneficent organization, ending with the close of the Cuban war.

Greek Melic Poets, by HERBERT W. SMYTH. The Macmillan Co., New York, 1900. pp. 564.

The text of these fragments from many authors, known and unknown, occupies less than a quarter of the volume. The first quarter and the best is devoted to characterizing twenty-one styles of poetry,—namely, those addressed to the gods, men, and both. The last half of the book is devoted to very typical philological notes, and an appendix contains skolia attributed to the sages, and the music of two hymns to Apollo.

Lessons in Elementary Physiology, by THOMAS H. HUXLEY. Edited for the use of American schools and colleges, by Frederic S. Lee. The Macmillan Co., New York, 1900. pp. 577. Price, $1.40.

Few books have been more extensively and carefully revised than these lessons since they appeared in 1866—first by Huxley himself, then by Foster and Lea, and now by Lee. The changes necessary to adapt an English book to American students are considerable, but these have been made with piety to the original as a true labor of love. It now seems to have certain advantages over others well known in the field.

A Manual of Zoölogy, by T. JEFFREY PARKER and WILLIAM A. HASWELL. The Macmillan Co., New York, 1900. pp. 563. Price, $1.60.

This concise text book, with 327 cuts, is adapted from the English edition to suit the requirements of students in the high school classes and to some extent in the junior classes of the university. A great reduction has been made, chiefly in limiting embryology, omitting all extinct groups, and dropping certain classes of animals. The work, as it now stands, is certainly a model of compactness.

The Confessions of an English Opium-Eater, Being an Extract from the Life of a Scholar, by THOMAS DE QUINCEY. Edited with Introduction and Notes by Arthur Beatty. The Macmillan Co., New York, 1900. pp. 211. Price, 25 cents.

This is certainly a marvel of taste, cheapness and scholarship.

The Temple Primers. The Macmillan Co., New York. Price, 40 cents each.

Dante, by EDMUND G. GARDNER. pp. 159.
Ethnology, by MICHAEL HABERLANDT. Translated by J. H. Loewe. pp. 169.
The Civilization of India, by ROMESH C. DUTT. pp. 146.
The Greek Drama, by LIONEL D. BARNETT. pp. 114.
Roman History, by JULIUS KOCH. Translated by L. D. Barnett. pp. 160.
A History of the English Church, by H. D. M. SPENCE. pp. 250.

These booklets are models of good taste, good editing, and cheapness. One, like the Ethnology with fifty-five cuts, is copiously illustrated. The subjects too are well chosen, and the motto of the Encyclopedic Temple Primer Series "condensed information introductory to great subjects by leading authorities" is well lived up to.

Athalie, by JEAN RACINE. Edited with Introduction, Notes and Index by H. W. Eve. Univ. Press, Cambridge, and The Macmillan Co., New York, 1899. pp. 155. Price, 50 cents.

The press series of which this is a sample is widely and well known in England. This is an attractive volume, about half of which consists of notes and an introduction.

Stick-and-Pea Plays: Pastimes for the Children's Year, by CHARLES S. PRATT. Lothrop Publishing Co., Boston, 1899. pp. 112.

It is certainly interesting and quite remarkable to see how many different things can be made by half-boiled peas and toothpicks, and how many things these can be called by a little stretch of the imagination. Even a bicycle, yacht, turkey, cradle, and Christmas trees, can be thus made in ways pictorially shown here.

Helps to the Study of Classical Mythology for the Lower Grades and Secondary Schools, by BENJAMIN L. D'OOGE. George Wahr, Ann Arbor, 1899. pp. 180.

These helps consist of very copious references not only to standard works but to magazine articles on myths in general, those of creation, gods of Olympus, earth, water, heroes, etc. There is a good classification of nature myths, and finally a suggestive book list for the grades.

Topics on Greek and Roman History, by ARTHUR L. GOODRICH. Intended for Use in Secondary Schools. The Macmillan Co., New York, 1900. pp. 98. Price, 60 cents.

The topics include the whole field of Greek and Roman history. Nearly one hundred books given at the outset are the basis for the references upon each topic. There is some adaptation to the conference report of the Committee of Ten, adjustment to recitation or written exercises, and to more elementary and advanced work.

Old Norse Stories, by SARAH P. BRADISH. American Book Co., New York, Cincinnati, and Chicago, 1900. pp. 240.

Miss Bradish here tells about thirty-fiye of the most important stories of Old Norse legend for children. Those I have read seem to be very well told.

First Book Home Geography and the Earth as a Whole, by RALPH S. TARR and FRANK M. McMURRY. The Macmillan Co., New York, 1900. pp. 279. Price, 60 cents.

This is a very suggestive combination of work by an expert geologist and pedagogue, with 224 cuts, a number of maps, and an appendix with considerable statistical information and plenty of references for further study.

First Reader for Use during the First School Year, by NORMAN F. BLACK. The Macmillan Co., New York, 1899. pp. 141. Price, 30 cents.

Script forms precede and the transition to print is gradual. Diacritical points are made very prominent. Fairy tale material is used in the latter part.

BOOKS RECEIVED.

AREY, ALBERT L. Elementary Chemistry for High Schools and Academies. The Macmillan Co., New York, 1899. pp. 271. Price, 90 cts.

COMPAYRÉ, GABRIEL. Entwicklung der Kindesseele. (Int. Päd. Bibliothek. Herausg. von Chr. Ufer. Band I.) O. Bonde, Altenburg, 1900. pp. 460. Price, in paper, Mk. 8.

GILBERT, GEORGE H. The Student's Life of Jesus. Third edition revised and enlarged. The Macmillan Co., New York, 1900. pp. 418. Price, $1.25.

HAUF, WILHELM. Der Scheik von Alessandria und seine Sklaven. Edited with notes and vocabulary by Walter Rippmann. The Pitt Press Series. The Macmillan Co., New York, 1900. pp. 183. Price, 60 cts.

HORNEFFER, ERNST. Nietzsches Lehre von der Ewigen Wiederkunst und deren bisherige Veröffentlichung. C. G. Naumann, Leipzig, 1900. pp. 84.

JEBB, R. C. Humanism in Education. The Romanes Lecture, 1899. The Macmillan Co., New York, 1899. pp. 43. Price, in paper, 80 cts.

MACDOUGAL, DANIEL T. The Nature and Work of Plants. An introduction to the study of botany. The Macmillan Co., New York, 1900. pp. 218. Price, 80 cts.

PAPE, GEORG. Lotzes Religiöse Weltanschauung. C. Skopnik, Berlin, N. W., 1899. pp. 93.

RICE, J. M. The Rational Spelling Book. Parts 1 and 2. American Book Co., New York, 1898.

SMITH, JEANIE O. Blackie's Diary. New York, 1899. pp. 97.

WARD, EDWARD G. The Rational Method in Reading. Third Reader. Silver, Burdett and Co., New York, 1899. pp. 174.

WARNER, FRANCIS. The Nervous System of the Child: Its Growth and Health in Education. The Macmillan Co., New York, 1900. pp. 233. Price, $1.00.

THE
PEDAGOGICAL SEMINARY.
Founded and Edited by G. STANLEY HALL.

VOL. VII. JULY, 1900. No. 2.

EDITORIAL.

In the first article of the present number, Professor Dawson presents the results of a long study of the natural interests of children in the Bible. While the author feels profoundly the desirability of larger numbers, he sees the suggestiveness and great significance of his results. He has made it at least probable that the typical boy or girl from 9 to 14 on the whole prefers the Old Testament to the New; that interest in the Gospels becomes dominant only after adolescence; and that at 12 and 13 boys' preference for the Old over the New Testament is greater than that of girls. Interest in the prophetic books is very slight before the teens, and Paul and the doctrinal parts have very slight interest before 20. For both boys and girls interest in Jesus is less than in at least two other characters of the New Testament and nearly equalled by several in the Old, due perhaps to the bad pedagogy that makes his deity and humanity interfere with and confound each the other. The personal element is most attractive to children. Boys' interest in John the Disciple culminates at 16, three years later than that of girls; their interest in David at 14.

Mrs. Burk presents the fullest study ever made on children's collecting instincts, which seem to culminate at 8 or 10. The order among the California children studied is cigar tags, stamps, birds' eggs, marbles, shells, buttons, pictures, etc.

Natural objects lead all others, most objects being found, not given or bought, and imitation being the chief motive.

Professor Hodge brings out the practical conclusions of his two preceding articles on nature study, criticising in a very effective way some of the methods most widely approved and used.

Mr. Eby prints the condensed results of a more comprehensive study on the reconstruction of the kindergarten and it is hoped he will publish his results in fuller form in a volume later. Mr. Eby is familiar with German and has read all of Froebel with great care and attempted to sift all the more important authors in different languages upon the subject, has corresponded widely with kindergartners and visited the gardens of many States. While Mr. Eby does not take the somewhat radical view of the Editor of this journal, he sees very clearly the calamitous effects of the ultra conservative and metaphysical party among the kindergartners, and his conclusions cannot fail to commend themselves in general to every unbiased mind. The Editor regards this article on the whole as the most sane and competent presentation of the subject that has been made in recent years in any language and has accordingly given it unwonted space.

In the Literature and Book Notes, brief digests of the ten most important articles published in the Japanese journal for child study are given, and about forty recent publications are described.

CHILDREN'S INTEREST IN THE BIBLE.

By GEORGE E. DAWSON,
Sometime Fellow in Psychology, Clark University.

CHAPTER I.

INTRODUCTION.

The following study is an attempt to apply to religious education a principle and a method generally accepted in secular education. The *principle* may be thus stated: The spontaneous interests of a child are expressions of a stage of life. They indicate, therefore, fundamental needs and aptitudes. They afford a starting point for all education, formative and reformative. If they are healthy interests, they suggest the material and method to be employed in developing character through the use of good tendencies. If they are unhealthy interests, they suggest the material and method to be employed in developing character through the disuse or transformation of bad tendencies.

The scientific study of man is opening up to us many avenues of approach to this problem of interest. First of all, we may approach it through the child's relations to the race it springs from. Embryology, comparative anatomy, and comparative psychology supply evidence that the child, in the main lines of its development, repeats racial history. Its physical and psychical life begins with a summary of what humanity before it has lived through. In bone, muscle, nerve-cell, instinct and intelligence, we find traces of ancestral struggle, and progress or retrogression. Baldwin[1] says: "What is present in the mind now, in the way of function, is due somehow to the past. Nervous inheritance provides for the apparatus, and mental inheritance sums up the experience." The implication of this view is, that a child's spontaneous interests at different stages of its development reflect more or less clearly the tendencies built up in the experience of the race. Says Dewey:[2] "There is a sort of natural recurrence of the child mind to the typical activities of primitive peoples; witness the hut which the boy likes to build in the yard, playing hunt, with bows, arrows, spears, and so on." These interests are transitional, as are the stages of development of which they are an expression, but they have an important relation to the child's life. They indicate, in a broad way, what the child needs, or does not need, at that particular period.

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[1] *Mental Development in the Child and the Race*, p. 27.
[2] *School and Society*, p. 62.

Again, we may consider a child's interests from the view-point of its individual development. Neurology is showing us that there is a definite order of growth in the brain and nervous system. First to mature is the reflex mechanism; then, the mechanism of special sensation and movement; and finally, the mechanism underlying association of ideas and other more complex psychic processes. This suggests that the child's life is first reflex and instinctive; next, sensori-motor; and, last of all, associative and rational. Here genetic psychology makes its contribution to the problem, and tells us that the suggestions of neurology are true. The child is found to be first a creature of psychic reflexes or instincts, such as hunger, fear, anger, and sympathy; then, of sensations, such as tactile, gustatory, auditory and visual; then, of the more complex psychic processes, such as memory, imagination, will and conscience. The study of children's interests discloses to us the fact that these stages of neuro-psychical development are closely paralleled by just the spontaneous interests that we should expect to crop out. In general, the first interests of the child are those centering in its instinctive life. The next are those centering in its sensations and activities. The next are those centering in its intellectual life and its more complex feelings. According as the various stages of development throw into prominence one or the other group of neuro-psychical tendencies, we may expect to find certain interests distinctive of that group and pointing the direction and progress of the child's growth.

As a result of such conclusions regarding the fundamental character of children's spontaneous interests, most of the branches ordinarily taught in the public schools are being scrutinized in a new light, and the entire question as to choice and gradation of lesson material is being reopened. Both educational experts and teachers practically engaged in school-room work are testing in various ways the educational values of the subjects taught and their adaptation to the different levels of feeling and intelligence. The elementary interests of children in the qualities of objects, such as *use*, *action*, *color*, *form*, and the like, have been studied by Binet,[1] Barnes,[2] and Shaw.[3] The distribution of interests among the subjects of the public school curriculum has been studied by Taylor.[1] Children's interests in the reading matter of the school curriculum, as well as their general literary interests, have been studied by Wissler,[2] Miss Chase,[3] and Kirkpatrick.[4] Miss Ward[5] has studied the geographical interests of children; Mrs. Barnes,[6] the historical interests; and Miss Gates,[7] the musical interests. Play-interests have been studied by President Hall,[8] Ellis and Hall,[9] Gulick,[10] and Mrs. Burk.[11] The puzzle interests, as showing the more complex intellectual aptitudes of children, have been studied by Lindley.[12] O'Shea,[13] has studied children's interests in pictures, myth and nature literature, etc. While their interests as revealed in ideals, ambitions, and choice of occupations, have been studied by Barnes,[14] Miss Darrah,[15] Monroe,[16] and Jegi.[17]

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[1] *Revue Philosophique*, December, 1890.

[2] *The Pacific Educational Journal*, February, 1896.

[3] *Child Study Monthly*, Vol. II, pp. 152-167.

It is evident, therefore, that the principle of interest has the sanction of scientific research, and that it is rapidly becoming a standard for estimating the material of instruction. I see no reason why the same principle should not be recognized in shaping the curriculum of religious education. And I see no reason why those who are concerned with the education of children in the Sunday School, or in the church at large, should not abandon the standards of adult *opinion* and adopt a standard of *facts*, derived experimentally from the consciousness of the child. As it seems to me, the evidence is conclusive that until this is done, the programme of religious instruction will lack a secure basis. We live in an age when the principles of inductive science are being applied to every form of human culture. In secular education at least, Bacon's prophetic dictum is at last coming to be recognized. "Man, as the minister and interpreter of nature, does and understands as much as his observations on the order of nature, either with regard to things or the mind, permit him, and neither knows nor is capable of more" (*Novum Organum*). In such an age, the *a priori* conclusions of adults, or guesses, more or less accurate, as to what a child needs, cannot much longer meet the requirements.

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[1] *Pedagogical Seminary*, Vol. V, pp. 497-511.

[2] *Pedagogical Seminary*, Vol. V, pp. 523-540.

[3] *Proceedings N. E. A.*, 1898, pp. 1011-1015.

[4] *North Western Monthly*, Vol. VIII, pp. 651-654; Vol. IX, pp. 188-191, and pp. 338-342.

[5] *Education*, Vol. XVIII, pp. 235-240.

[6] Barnes's *Studies in Education*, pp. 83-93.

[7] *Journal of Pedagogy*, Vol. II, pp. 265-284.

[8] *Scribner's Magazine*, Vol. III, pp. 690-696.

[9] *Pedagogical Seminary*, Vol. IV, pp. 129-175.

[10] *Pedagogical Seminary*, Vol. VI, pp. 135-151.

[11] *North Western Monthly*, Vol. IX, pp. 349-355.

[12] *American Journal of Psychology*, Vol. VIII, pp. 431-493.

[13] *Child Study Monthly*, Vol. II, pp. 266-278.

[14] *North Western Monthly*, Vol. IX, pp. 91-93.

[15] *Popular Science Monthly*, Vol. LIII, pp. 88-98.

[16] *Education*, Vol. XVIII, pp. 259-264.

[17] *Transaction of the Illinois Soc. of Child Study*, Vol. III, pp. 131-144.

Such considerations as the foregoing have suggested the *method* employed in this study. Starting from the conclusions of current scientific inquiry as to the meaning of children's spontaneous interests, and following the same general lines that have been followed in the studies of children's interests referred to above, I have attempted to investigate the interest of children in the Bible. The questions I have kept before me are the following:

1. How do children feel towards the Old and the New Testament, respectively, at different ages?
2. How do they feel towards the various books of the Bible at different ages?
3. How do they feel towards the different scenes, stories, and characters of the Bible at different ages?
4. What is the development of interest in the scenic, narrative, and personal elements of the Bible as age advances?
5. What is the development of interest in the person and works of Jesus as age advances?

A syllabus of questions was prepared in such a way as to bring out directly and indirectly the information sought under each of these heads. Over 12,000 copies of this syllabus were given out to parents, Bible-school teachers, and public school teachers. Instructions were usually given to extend the observations over as long a period as possible, and to use such exact tests as they could in getting at the preferences of children. From the children thus studied by others, and those studied by myself, 1,000 have been selected as the basis of this paper. Most of these children live in the larger cities and towns of New England. They are mainly of American parentage, though there are included a few Italians and French Canadians. They are distributed among all the evangelical denominations, the Congregationlists predominating. There are, besides, a few Catholics. The children range in age from 8 to 20, and are about equally distributed as to age and sex. Returns were received from some adults above 20, but these are not included in the results as summarized. In general, it is believed that the children studied are typical, and that the returns afford a reasonably accurate illustration of children's Bible-interests within the ages and classes represented.

CHAPTER II.

ANALYSIS OF DATA.

§ I.

Choice between the Old and the New Testament.

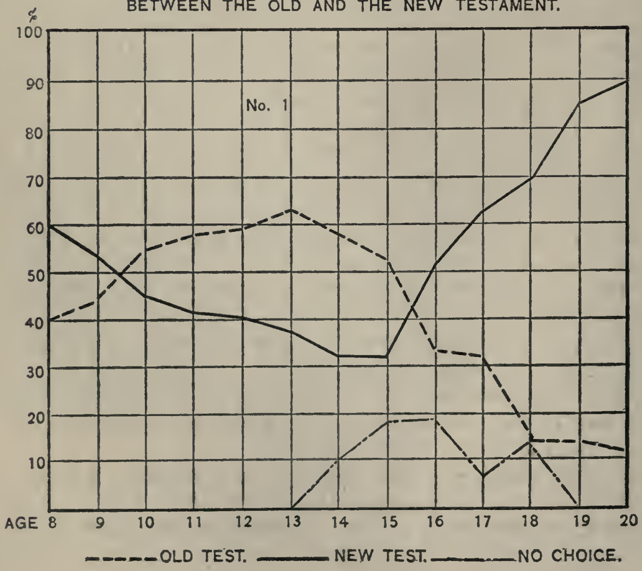
I have based my estimate of children's choice between the main divisions of the Bible upon three classes of facts: (1) Their own direct statements as to their preference; (2) indirect evidence secured through their choice of Bible scenes, stories and characters; and (3) the judgment of teachers. At first thought, a child's statement that he likes one part of the Bible better than another might seem to have little value. And yet, when we look at the matter from the standpoint of every-day experience, is there not every reason for thinking that the average child, in the Christian home or Sunday School, knows what he likes, or does not like, in the Bible as in other things? When the schoolboy says he likes United States history better than arithmetic, or *vice versa*, there is no reason for doubting the genuineness of his preference. When the boy says he likes to read the life of Daniel Boone, or the story of Robinson Crusoe, better than a treatise on physics, we do not hesitate to accept his statement as significant. We adults often forget that children's likes and dislikes are more spontaneous than our own, and that they are apt to be much less disguised. There has nothing impressed me more in looking over the returns received from children than the perfect candor of their answers. This was not always the case in the returns received from adults. The latter often hesitated to express a preference, giving reasons that indicated clearly a feeling that it was not just the proper thing to like one part of the Bible better than another. Every part of the Bible is holy; therefore, the properly constituted man or woman should like one as well as another. The typical child is not troubled with any such feeling towards the Bible. If he does n't like some portion of it, he says so; or if he does n't like any of it, he says so. This may be additional evidence of his innate depravity. I merely state the fact. A child's statement that he likes the Old Testament better than the New, or *vice versa*, seems to me therefore to be worthy of acceptance as an index of his interest. When such a statement is, in general, confirmed by the indirect evidence of other preferences and by the testimony of teachers, one's conclusions ought to rest upon a fairly substantial basis.

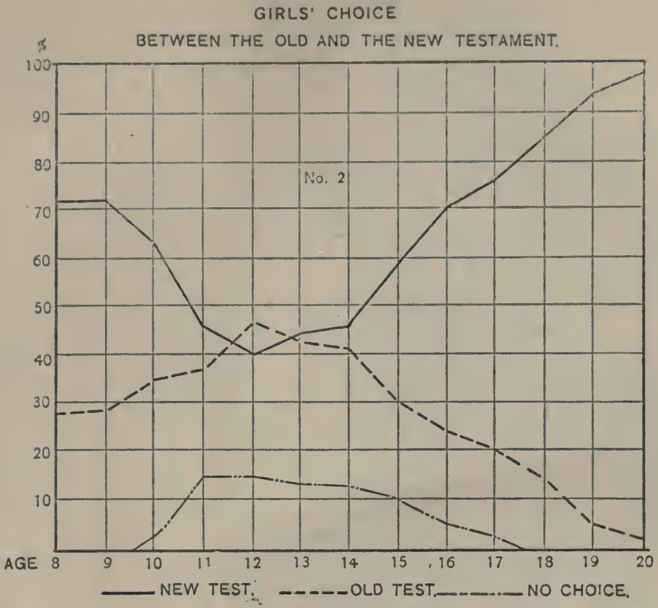
At eight years old, the majority of children of both sexes prefer the New Testament; that is to say, 60% of the boys and 72% of the girls. The interest in the New Testament declines, however, during the next few years, reaching its minimum at 14, in the case of boys, and at 12, in the case of the girls. At this point, 32% of the boys and 40% of the girls prefer the New Testament. At 15, the interest of the boys remains about the same as at 14, but thereafter it rises rapidly and steadily until at 20 years 88% prefer the New Testament. The girls' interest rises slowly from 12 to 14, and thereafter rises even more rapidly than the boys', until at 20 years 97% prefer the New Testament. At eight years, 40% of the boys and 28% of the girls prefer the Old Testament. From eight years on, the interest in the Old Testament steadily rises, reaching its maximum at 13, in the case of the boys, and at 12 in the case of the girls. At this point, 63% of the boys and 46% of the girls prefer the Old Testament. Thereafter, in the case of both sexes, the interest steadily declines, until at the age of 20, 12% of the boys and 3% of the girls express a preference for the Old Testament. From 13 to 19 years, some of the boys say they have no choice, the maximum of such being reached at 15 and 16. In the case of the girls, this period of uncertainty reaches from 10 to 17, the maximum being reached at 11 and 12. A graphic presentation of these results is given in diagrams 1 and 2.

What interpretation may we place upon these results? To begin with, the interest of the youngest children in the New Testament is probably not a general interest in that division

BOYS' CHOICE

BETWEEN THE OLD AND THE NEW TESTAMENT.





of the Bible. It centers rather in the Infant Jesus. A child is always of interest to other children, whether in life or story. The scenes and incidents of the Bible relating to childhood are prime favorites with most of the younger children that have been studied. Thus, the birth of Jesus, the finding of Moses by Pharoah's daughter, Jesus blessing little children, and the flight into Egypt are among the most commonly mentioned. To this natural interest in the childhood of the Bible must be added the special interest derived through Christian art and literature, dealing with such events as the Annunciation, the Nativity, and the Flight into Egypt, much of which the average child has some acquaintance with. Besides these aids to interest, we must also take into account the associations of Christmas time, which give the birth and childhood of Jesus a unique place in children's affections. It is not surprising, therefore, that the New Testament, which contains the stories and scenes relating to a child naturally interesting, and rendered more so by the art, literature, and customs of Christian civilization, should be preferred by so many of the younger children.

This element of attractiveness aside, however, it is probable that the New Testament does not naturally appeal so strongly to children as does the Old. So early as eight years, 40% of the boys and 28% of the girls prefer the Old Testament, and these percentages steadily rise for some years. This indicates that even in the youngest children, to whom the Infant Jesus is especially attractive, there are other forces at work in determining their interest. These forces assert themselves more and more, and during the years from nine or ten, on to thirteen or fourteen, they shift the center of interest to the Old Testament. How strong these forces must be, is suggested by another important fact, that should be taken into account in this connection. In general, religious teachers lay much more stress upon the facts and teachings of the New Testament than upon those of the Old. As shown by this study, the interest of adults is overwhelmingly in favor of the New Testament. Estimating the child from the adult standpoint, these adults impose their interests upon the children they instruct. Very naturally, there is thus given to the children an interest in facts, doctrines, etc., that is not spontaneous, but derived from the teachers. This derived interest undoubtedly enters into the choice of children. And yet, as we have seen, the forces at work in these children's natures are sufficiently strong to offset the bias induced by adult example and to turn the balance in favor of the Old Testament. *Everything considered, it is probable that the typical boy or girl from nine years to fourteen, is more attracted to the Old Testament than to the New.*

There is some light shed upon this matter by the scientific studies already referred to. If it be true that the various levels of instinct and intelligence in racial life have their outcroppings in the development of the individual child, and if we may regard the development of the Hebrew people as typical of the life of the race as a whole, ought we not to expect that the main centers of children's interest in the Bible will shift from the Old to the New Testament as manhood and womanhood approaches? To illustrate: The fundamental human instincts may be classified as *egoistic*, or selfish, and *altruistic*, or unselfish. Psychologists are agreed that racial development, as well as individual development, is away from the predominantly selfish instincts towards the predominantly unselfish instincts. Now the Old Testament scriptures appeal more especially to the former class of instincts; while the New Testament scriptures appeal rather to the latter. Fear, anger, jealously, hatred, revenge, etc., are conspicuous attributes of God and men, in the Old Testament; while sympathy, compassion, trustfulness, and love are the most prominent attributes of God and men, in the New. In short, the Bible moves from an egoistic point of view regarding God and mankind, to an increasingly altruistic point of view. The parallelism between the development of the child and the development of the Bible is therefore clearly suggested, so far as concerns these great central instincts of the human soul.

Again, psychologists are agreed that the human race has developed from a predominantly sensori-motor type towards a predominantly associative and rational type. Primitive man lives in his senses and activities. The world is essentially a sensuous world to him. He delights in everything that appeals strongly to sight, hearing, touch, taste, and smell. This explains his fondness for bright colors, massive sounds, pungent tastes, strong odors, and the like. His motor nature is also dominant in his enjoyments, as is shown especially in his fondness for dancing, wrestling, and other feats of strength and prowess. The individual child likewise develops from the sensori-motor to the rational in its nature and interests. In vividness of sense-impressions and in constancy and variety of spontaneous movements, children surpass adults. Gilbert[1] found by testing school children that the great period of sense-development is from early childhood up to 10 or 12. The play-activities of children during the same period are very marked, as many investigations have shown. Out of this sensuous and intensely active life of children spring those interests that reveal themselves in a fondness for spectacular scenes, feats of skill and daring, and the general flesh-and-blood heroism so attractive to boys and girls. Studies made of children's reading interests bring to light the fact that in the period just preceding adolescence there is a marked fondness for the heroic in literature. Thus, Principal Atkinson,[2] of the Springfield, (Mass.) High School, found that the books read the preceding summer by an entering freshman class were largely biographical, including a range of heroes from Charlemange and Cromwell to Daniel Boone and Buffalo Bill. In general, an ideal or heroic character placed in a historic situation seemed to appeal to the largest number.

Now the Bible illustrates a similar development from the sensori-motor type of life towards the associative and rational type of life. The Old Testament abounds with spectacular scenes, such as the fight between David and Goliath, and Daniel in the lion's den; thrilling stories, such as those associated with the lives of Moses and Joseph; and heroic characters, such as Abraham and David. There is throughout a combination of scenic splendor, striking episodes, and unique personalties that impresses the senses most vividly and appeals to the love of dramatic action. It is true, of course, that the motive of the Old Testament is religious. There was no design on the part of its writers to present a pageant of striking characters and incidents. But the method is, nevertheless, that of the primitive mind, which seizes upon the sensuous and the dramatic, rather than the rational and reflective, elements of life and religion. Here again, therefore, we find a parallelism between the development of the child and the development of the Bible.

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[1] *Studies from the Yale Psychological Laboratory*, Vol. I, p. 80, and Vol. II, p. 90.

[2] *Proceedings of the N. E. A.*, for 1898.

This parallelism between the unfolding of racial consciousness as revealed in the Bible and the unfolding of the child's consciousness, has further illustration when we direct our attention to the older children included in this study. Here we find that as life ripens into adolescence, the centers of interest shift to the New Testament. From 15 years on, in the case of the boys, and from 14 years on, in the case of the girls, the preference for the latter becomes more and more marked. Now, all the studies of adolescence tend to show that this period marks a psychical, as well as a physical rebirth. The child is born out of an individualistic type of feeling into a social type of feeling; out of a sensori-motor type of intelligence into a reflective type of intelligence; out of an *egocentric* and *sensuous* life, in short, into a life *altrocentric* and *rational*. Hancock[1] has found by experimental tests that children's ability to reason increases rapidly with the approach of adolescence. Lancaster[2] shows that during this period altruistic feeling is extremely active in both sexes, revealing itself in philanthropic work of all kinds. Starbuck[3] and Gulick,[4] by statistical studies and conversion, find that the great majority of accessions to the church take place between 12 and 20 years of age. We may conclude, therefore, that just as Jesus and the Christian type of consciousness represented a new birth for the race, so does the flowering out of the altruistic and reflectively religious consciousness of adolescence represent a new birth for the individual. In other words, just as the personality of Jesus and his regimen of life sum up the ideals towards which the race is struggling, so do they sum up the ideals towards which the individual soul is struggling.

As regards the children who express no preference between the Old and the New Testament, it will be observed that they fall within those ages when the interests of the majority of the children are shifting from the Old to the New Testament. From what has already been said, it is evident that the transformation from the egoistic, sensuous life of childhood, to the altruistic, reflective life of adolescence, must occasion a severe conflict of interests. This general conflict of interests is doubtless reflected in the inability, or disinclination, of some to choose between the Old and the New Testament. Teachers and parents often remark upon the indifference of some children during these beginning years of adolescence. As is well known in Sunday-School work, this is a period when children are kept in their classes with difficulty. The study of children reveals the fact that early adolescence is the birth-time of doubts and vacillations in conduct. Now probably these phenomena are due in part to the physical and psychical strain of the period, more intense in some children than in others. But I venture to suggest that all such indifference, doubt, or whatever it may be, is largely due to the conflict of interests incident to the transition from one type of life to another.

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[1] *Educational Review*, Oct., 1896.

[2] *Pedagogical Seminary*, Vol. V, pp. 61-128.

[3] *American Journal of Psychology*, Jan., 1897, and Oct., 1897.

[4] *Association Outlook*, Springfield, Mass., Vol. VIII, pp. 33-48.

To conclude this discussion regarding the choice of children between the Old and the New Testament: Have we not in the development of children's interest in the main divisions of the Bible a verification of an age-long belief? The Christian world has long been familiar with the thought that the Old Testament is preparatory to the New. The historical events recorded in the former have their culmination in the latter. The prophecies springing from the life of ancient Israel anticipate the life and utterances of Him who came out of Nazareth. The laws given at Sinai have their fulfillment in the Sermon on the Mount. In short, in the words of Paul:[1] "The law was our schoolmaster to bring us unto Christ." This popular view of the relation between the Old and the New Testament is being confirmed by the conclusions of modern biblical scholarship. The Hebrew Scriptures illustrate the general laws of development in the life of a people. Each step in the unfolding of Hebrew institutions, customs, laws, and moral and religious ideals, is related to all that precedes and all that follows. The new dispensation could not come till the old had prepared at least a few choice souls for its reception. The words of Paul,[2] "When the fullness of time was come, God sent forth his Son," have thus their modern reading in the theory of human development.

§ II.

Choice among the Books of the Bible.

The data summarized under this head contribute to the same general results as those reached in the preceding section. In addition, however, they bring to light the interests of children from a more distinctively educational point of view. The material of the Bible, as commonly given to children, may be classified under the following heads: (1) Historical (including the geographical), (2) prophetic, (3) gospel, and (4) doctrinal. To these may be added the literary, including the poetic and wisdom books. Following the lines of this classification, I have grouped the various books of the Bible for which the children indicated a preference, under six heads: *Historical*, *prophetic*, *poetic*, *wisdom*, *gospel*, and *doctrinal*.

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[1] *Epistle to the Galatians*, Chap. 3, Verse 24.
[2] *Ibid*, Chap. 4, Verse 4.

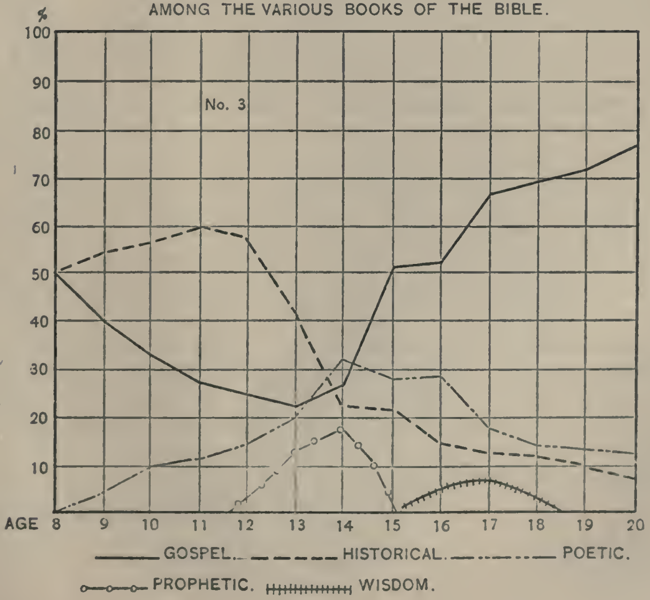
At eight years of age, the choice of the boys is equally divided between the historical and the gospel books. During the next three years, the interest in the historical books increases, reaching in the eleventh year 60%. Thereafter, the historical interest declines, falling to 22% in the fourteenth year and to 8% in the twentieth year. The interest in the gospel books falls off rapidly from the eighth to the thirteenth year, reaching at that time 22%. Then it rises steadily and rapidly to the twentieth year, when it reaches 78%. Interest in the poetic books begins at 9 years, rises steadily to the fourteenth year, when it reaches 33%, and then falls off more or less irregularly to the twentieth year, when it stands at 14%. From 12 to 15, there is some interest shown in the prophetic books, the maximum being 18% in the fourteenth year. There is also a slight interest shown in the wisdom books from 16 to 18, the maximum being reached at 17, when the percentage is seven. Not a single boy between the ages of 8 and 20 expressed a preference for a book that could be classed as doctrinal.

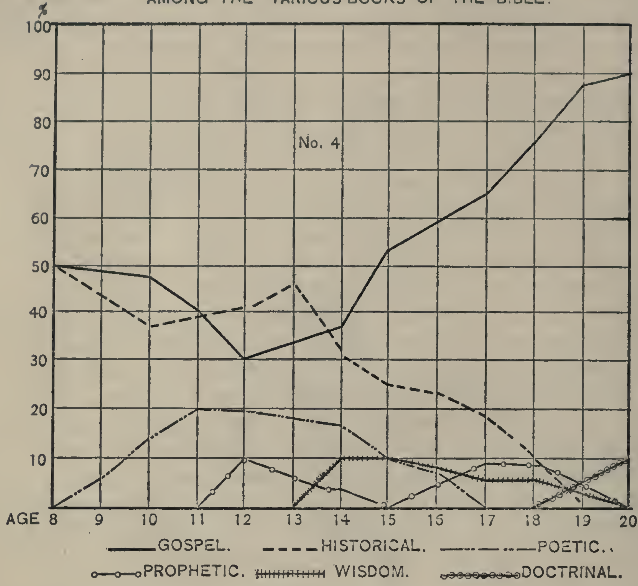
The girls also distribute their preferences equally between the historical and gospel books to start with. The historical interest then declines to 37% at 10 years, rises steadily to 46% in the 13th year, and thereafter falls to zero in the 19th year. The interest in the gospel books falls to 30% in the 12th year, and thereafter rises steadily and rapidly to 90% in the 20th year. The poetic interest appears first in the 9th year, rises to 20% in the 11th and 12th years, and then slowly declines to zero in the 17th year. Interest in the prophetic books has a somewhat uneven run from 12 to 20, reaching its maximum at 12 and again at 17. Interest in the wisdom books begins at 14, being at its maximum from that age to 15, and then declining to zero at 20. A slight interest is shown in the doctrinal books from 19 to 20, the maximum being 10%, at the latter age.

In general, therefore, we have a somewhat wide distribution of interests up to the beginning of adolescence, with some advantage in favor of the historical books, especially on the part of the boys. Literary, prophetic, and wisdom books come more into favor in the years just preceding adolescence and maintain a somewhat prominent place throughout the early years of that period; while the gospel interest stands out conspicuously as the pre-eminent adolescent interest. These results are brought out more graphically in diagrams 3 and 4.

In interpreting the foregoing results, we have first to note that, in general, the preferences coincide with those considered in the preceding section. Thus, the preference for the historical books, which are mainly in the Old Testament, run more or less parallel with the preference for the first division of the Bible. The preference for the gospel books, which are in the New Testament, run more or less parallel with the second division of the Bible. This is not so much the case with the younger children. Here the choice of gospel books is not so general as is the choice of the New Testament as a whole, while the choice of historical books is more general than is that of the Old Testament as a whole. This disparity of choice is due, in part at least, to some children's choosing the Acts of the Apostles, which was classed among the historical books. In general, therefore, the choice among the books of the Bible at different ages has the same explanation that has already been given to account for the choice between the Old and the New Testament. The preference

BOYS' CHOICE
AMONG THE VARIOUS BOOKS OF THE BIBLE.





GIRLS' CHOICE
AMONG THE VARIOUS BOOKS OF THE BIBLE.

of the younger children for the gospel books is due to the fact that these books contain the scenes and incidents associated with the infancy of Jesus. The preference of the older children for the historical books is due to the fact that these books contain the elements most attractive to the egoistic and sensuous natures of such children, while the choice of gospel books by adolescents is explained by reference to the general ripening of the altruistic and reflective life at that period.

However, we may look at children's choice among the books of the Bible from a somewhat different point of view and in greater detail. First, as to the choice of historical books. It has been found that the interest of public school children in history and geography is marked during the period from 9 or 10, on to 13 or 14. Mrs. Barnes[1] found that the historic sense has a rapid development during these years. Her curves are very similar to those shown in the above diagrams. She concludes that from seven years on, history becomes an increasingly attractive subject for children, though the larger historical interest does not develop, perhaps, before 11 or 12. Miss Ward,[2] who studied the geographical interests of several thousand children, finds that there is a marked interest in places, especially in places that have human associations. I have studied the general school-interests of over 1,000 children in the public schools of Springfield, Mass., and find that both the historical and the geographical interests begin to be prominent at 10 years. These facts make it probable that children from 9 or 10 years, on to 13 or 14, will be naturally interested in the historical and geographical elements of the Bible. There is also another fact to be taken into account in this connection. There is evidence for believing that children during this period have especial aptitude for memorizing. All those studies that involve a constant exercise of memory, such as language, arithmetic, geography and history, are more easily taught to children at this time. Street[1] concludes from his study of language-training that children acquire languages most readily from 8 to 12 years. Bolton[2] found that the memory of children for numbers practically reaches its maximum in the grades below the high school. Shaw[3] found that the memory of children for the essential elements of a story culminated just before the high school period is reached. Scripture[4] found that the time-memory in children reaches its greatest accuracy at about 13 or 14 years. These investigations indicate that the period of life in question is peculiarly adapted for *fact-studies*, which make great demands upon the memory. And this again renders it probable that children's preference for the historical books of the Bible is based, in part, upon certain special intellectual aptitudes.

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[1] Barnes's *Studies in Education*, pp. 43-52, and 83-93.

[2] *Education*, Vol. XVIII.

Next, as to the choice of prophetic and literary books. "Prophecy" consists of two things as applied to the Bible: (1) The revelation of coming events; and (2) The speaking forth of the deeper truths of life. Perhaps, in the last analysis, these two things are one, but we ordinarily consider them distinct. Now, adolesence is the "Golden Age" of prophecy. It is then that the individual consciousness is reborn into the consciousness of the race. The deeper truths of existence are yearned for and glimpsed. There is a moral and religious ferment, and the loftiest and the most sordid ideals struggle for mastery. Moreover, it is then that the human soul looks most anxiously into the future. Perhaps it looks farthest into the future. Certainly it tries then, as at no other time, to learn its horoscope. Witness the idealizing, the day-dreaming, the fortune-telling devices of young people. Lancaster[1] in his study of the psychology and pedagogy of adolescence, has collected data illustrating both these aspects of the prophetic spirit. The longing for the more vital truths of life, and the far-looking into the future, recur again and again in the returns received from the youth of both sexes. Adolescence is also the period when literary feeling and aspirations ripen. These are offshoots of the æsthetic nature, and studies of adolescent life bring to light the fact that all the forms of æsthetic feeling and activity begin to crop out early in this period. In the study of children's school-interests already referred to, I have found that the interest in painting, drawing and music increases rapidly from 12 years on. Lancaster found that of 100 actors, 50 poets, 100 musicians, 50 artists, and 100 writers, the majority had achieved success in their art before the age of 20, showing that the life of æsthetic feeling and idealism is well developed in early adolesence. The preference of children for the prophetic and literary books of the Bible, in the early adolescent years, is, therefore, doubtless an expression of more general moral and æsthetic interests.

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[1] *Pedagogical Seminary*, Vol. IV, pp. 269-293.
[2] *American Journal of Psychology*, Vol. IV.
[3] *Pedagogical Seminary*, Vol. IV, pp. 61-78.
[4] *Thinking, Feeling, Doing*, p. 251.

Finally, as to the choice of gospel books: This is pre-eminently the choice of the adolescent. From what has already been said, it is evident that adolescence needs, and seeks, above everything else, some kind of a philosophy and regimen of life. Life has become a thing fraught with a new but vague meaning; the struggle is to make its meaning clear. Life has become a larger, richer thing; the struggle is to learn the method by which its largeness and richness may be personally realized. The quickening of moral feeling leads to self-scrutiny and an apprehension of more or less friction between the self and the best environments. The quickening of the religious feelings begets a desire to get adjusted to the largest and best ideals. The quickening of the sense of life, as lived through others and for others, awakens the impulse to become a part of the great cosmic struggle for more complete existence. In the gospels is found the Christian philosophy of life; and in the gospels is found the Christian regimen of life, in its broad outlines. For the gospels reveal the personality of One who "came that they might have life and that they might have it more abundantly," and Christian philosophy sums itself up in personal character. And the gospels reveal broadly the Christian regimen of life, for this is simply to follow where He leads. It is not surprising, therefore, that, when the meaning and method of life are sought with such earnest zest as during the adolescent years, the Christian explanation of what life is, and how it may be lived, should be of interest.

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[1] *Pedagogical Seminary*, Vol. V, pp. 61-128.

§ III.

Choice of Bible Scenes, Stories and Characters.

The data collected under this head bear upon three points: (1) The scenes, stories, and characters that are most liked; (2) The development of interest in the scenic, narrative, and personal elements; and (3) The comparative interest in the three classes of elements at different ages. Preferences were shown for 57 different Bible scenes, 26 from the Old Testament and 31 from the new. Of these, the fifteen most popular scenes are the following:

		BOYS.	GIRLS.	TOTAL.
1.	Daniel in the Lion's Den,	53	52	105
2.	The Crucifixion,	45	33	78
3.	The Birth of Jesus,	27	38	65
4.	Jesus Blessing Little Children,	13	42	55
5.	The Lord's Supper,	30	23	53
6.	Feeding the Five Thousand,	25	24	49
7.	Jesus Walking on the Sea,	10	27	37
8.	The Resurrection,	18	18	36
9.	The finding of Moses,	13	21	34
10.	The Raising of Lazarus,	8	24	32
11.	The Transfiguration,	10	21	31
12.	Jesus before the Wise Men,	5	20	25
13.	Jesus' Triumphal Entry,	12	13	25
14.	The Woman at the Well,	15	10	25
15.	The Stilling of the Tempest,	12	12	24

It will be observed that all but two of these fifteen scenes are from the New Testament. Probably this is to be accounted for, in part, by the influence of pictures. Many of the scenes mentioned are the commonest subjects of the masterpieces of Christian art, reproductions of which appear in pictorial Bibles, Sunday-School literature, and the like. It is also due, undoubtedly, to the intrinsic attractiveness of the personality and works of Jesus. All of the scenes from the New Testament have him as their central figure, three presenting him as a child or in connection with children. The most popular scene of all, however, is Daniel in the Lions' Den. This is unquestionably one of the most graphic scenes in the Bible when given pictorial representation, as it often is, in religious literature. This fact is sufficient to account for its popularity. The popularity of the crucifixion is doubtless due, in part, to Christian art and to the emphasis placed in religious teaching upon the death of Jesus. It is also, probably, due to a lurking fondness in some children for cruel and tragic scenes. One boy, in describing his preferences, said, "I like anything that has murder and such things in it." It is to be hoped that not many children share this feeling. But there is here suggested a possibility that should inspire caution in those who are disposed to dwell upon such scenes in religious teaching.

The choice of Bible stories has a total range of 38, twenty-three of these being drawn from the Old Testament and 15 from the New. The most popular of these are the following:

		BOYS.	GIRLS.	TOTAL.
1.	The Selling of Joseph,	48	99	147
2.	David and Goliath,	50	50	100
3.	Daniel and the Assyrian Kings,	43	41	84
4.	Moses and Pharoah's Daughter,	25	44	69
5.	The Story of Ruth,	10	41	51
6.	Story of Jesus' Birth,	20	29	49
7.	The Prodigal Son,	15	23	38
8.	Story of Noah's Ark,	20	18	38
9.	The Calling of Samuel,	16	16	32
10.	Samson and the Philistines,	20	7	27
11.	The Flight into Egypt,	3	15	18
12.	Jonah and the Whale,	10	7	17
13.	Story of Esther,	7	10	17
14.	Changing Water into Wine,	5	12	17
15.	The Good Samaritan,	5	11	16

It appears from this that Old Testament stories are more popular than are New Testament stories, the five standing highest in the list being drawn from the Old Testament. These five stories have all the essential elements that make such productions attractive to the young,—heroic characters, heroic situations, heroic actions. The same is true, in a somewhat less degree, of the remaining five stories drawn from the Old Testament. From all that has been said about the egoistic sensuous life of children in the earlier years, we are prepared to understand why the story-interest should center in that division of the Bible. The most popular story in the New Testament is that of Jesus' birth, many of the youngest children choosing this, as we might expect from what has preceded. But one story in this group of fifteen is based upon a miracle, and this probably owed its interest for children to the human elements involved. In general, few children expressed a liking for miracles.

A total of 45 Bible characters were chosen—25 Old Testament characters and 20 New Testament characters. The fifteen most popular are the following:

		BOYS.	GIRLS.	TOTAL.
1.	John the Disciple,	48	104	152
2.	Peter,	48	77	125
3.	Jesus,	48	66	114
4.	David,	49	65	114
5.	Moses,	44	59	103
6.	Paul,	31	63	94
7.	Joseph,	32	43	75
8.	Daniel,	19	36	55
9.	Samuel,	13	17	30
10.	Ruth,	7	17	24
11.	Elijah,	16	8	24
12.	Abraham,	10	11	21
13.	Solomon,	11	9	20
14.	John the Baptist,	8	7	15
15.	Mary, the Mother of Jesus,	4	11	15

From the foregoing, it appears the three characters most often chosen, are New Testament characters. The boys distribute their preferences equally among these. A much larger percentage of the girls, however, choose John the Disciple, while more of the girls choose Peter than Jesus. The qualities found in John are sufficient to account for his popularity. He is a gentle, loving, yet manly character. He is doubtless also loved for the sake of his Master, whom he so fittingly portrayed in the fourth gospel. The prominence of Peter is not so easily understood. Aside from his rugged, virile manhood, we have probably to take into account his unique place in Jesus' regard and the distinction he has enjoyed in church-history. It may seem strange that Jesus should rank lowest in the total preferences shown for these three New Testament characters. I am inclined to believe that this is not accidental, however. It is doubtful if the younger children at least were influenced by the theological estimate of Jesus. They probably see only the human Jesus, and if they think of Jesus as a man, when they are asked to express a choice between him and another man, they do so with the same candor that they show in other matters. I doubt not that Jesus is naturally the most attractive character in the Bible for children of all ages. This study shows that, as a child, he is more often chosen by the younger children than is any other character. It seems to me probable that this preference would continue among older children if the latter were allowed spontaneously to grow into an appreciation of the adult Jesus. But religious teachers are usually so anxious to present Jesus to children as a divine person, and children's minds are so unable to grasp the mystical implications of this dogma, that the human Jesus is taken away from them and the divine Jesus is made an intellectual abstraction. The result is, that the child can love neither the one nor the other. This religious forcing will inevitably shift the interest of a child to a character whose simple humanity it can understand and love. I believe this will account for the preference which so large a percentage of the girls show for John.

Among the Old Testament characters chosen, the most prominent are David, Moses, Joseph and Daniel. This is what we would expect from what we have already learned of children's preference for the heroic and dramatic elements of the Old Testament.

As regards the development of interest in the scenic, narrative, and personal elements of the Bible, we find: (1) That, in general, the interest in scenes and stories is somewhat more marked in the younger children than in the older; and (2) that the interest in characters increases with advancing age. Reference to diagrams 5 and 6 makes this sufficiently clear. From these diagrams, it will also be observed that the comparative interest in the three classes of elements at different ages is overwhelmingly in favor of the characters. *The larger percentage of children of all ages are attracted more strongly to the personal elements of the Bible than to any other.* This is shown not alone by the preference expressed for characters, but also by the choice of scenes and narratives themselves. Thus, of the 57 scenes mentioned, all but four have their center of interest in persons; while of the 38 Bible stories selected, all but three owe their interest to the characters that take part in them.

Sufficient has already been said in this and preceding sections to explain most of the above results. The overwhelming interest of children of all ages in the personal elements of the Bible deserves further discussion, however. The human interest of children has been generally observed by those who have studied the psychology of childhood. To adapt the sentiment of the Latin poet, nothing of human concern is foreign to the child. The first efforts of the little boy to realize his artistic ideals are usually pictures of men. The principal play-activities are reproductions of the lives of adult men and women. The reading interests of older children run mainly along the line of biography, or fiction in which the character element is prominent. Atkinson,[1] in commenting

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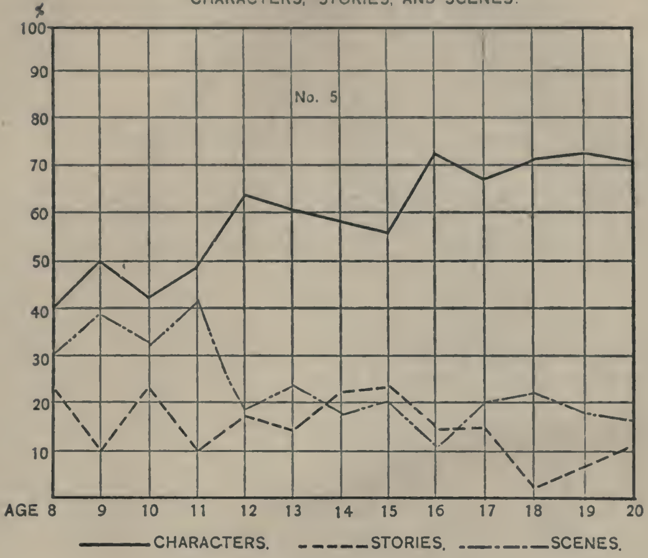
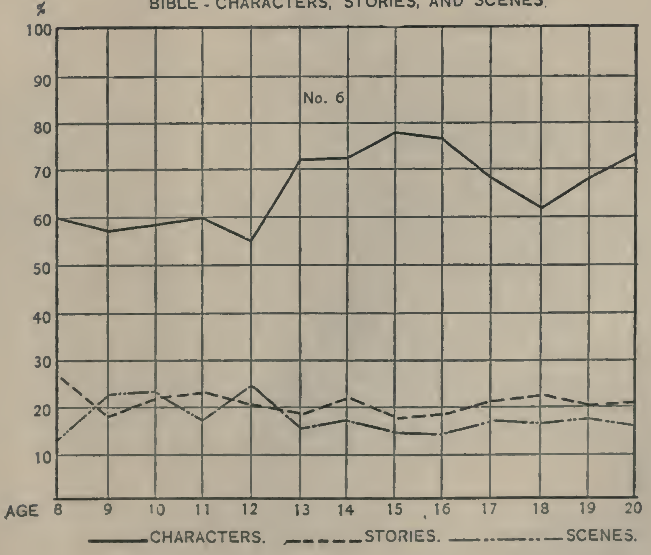
[1] *A Year's Study of the Entering Pupils of the Springfield, (Mass.) High School*, (*Proc. N. E. A.*, 1898).

COMPARATIVE CHOICE, AMONG BOYS, OF BIBLE-CHARACTERS, STORIES, AND SCENES.



COMPARATIVE CHOICE, AMONG GIRLS, OF BIBLE-CHARACTERS, STORIES, AND SCENES.



upon the reading-interest of boys at the high school period, says: "The Liking for biography is remarkable. One boy read the lives of Grant, Garfield, Sherman and Blaine. Another read the lives of Charlemagne, Cromwell, David Crockett, Daniel Boone, and Buffalo Bill." Mrs. Barnes,[1] from her study of the historic sense of children, concludes that history should primarily be taught through the biographies of heroic and striking characters. Miss Ward,[2] who has investigated the geographical interests of children, finds that five-sixths of the preferences for towns, cities or countries reveal a human interest. Miss Ward mentions Anna Buckbee as having made a similar study to her own, with similar results, and concludes by saying: "Does not the strong human interest shown by children lead us to unite with Miss Buckbee in asking if this does not show that the earth should be taught as the home of man?" The sentiment thus expressed, is rapidly becoming general in educational circles. History, geography, literature, and the elementary sciences are being taught more and more from the view-point of their human interest. In the light of such facts, the significance of children's predominant interest in the personal elements of the Bible becomes clear. Have we not here a suggestion that the Bible, too, may best be given to children through the medium of personal incident and biography?

§ IV.

Development of Interest in Jesus.

Finally, we may examine the data bearing upon children's interest in Bible characters, with a view to discovering whether there is any change from period to period in their regard for Jesus. For purposes of comparison, it will be helpful to make the development of interest in John the Disciple, and David, the most popular characters in the New and the Old Testament, respectively. First of all, we should remember that what has been said about little children's fondness for the infant Jesus will not hold to the same extent in the choice of Jesus as an adult character. In the former case, Jesus was thought of in the environment of childhood. His attractiveness for children was revealed through their fondness for the scenes and incidents connected with that period. In the latter case, he is thought of in relation to other adults and to adult environments.

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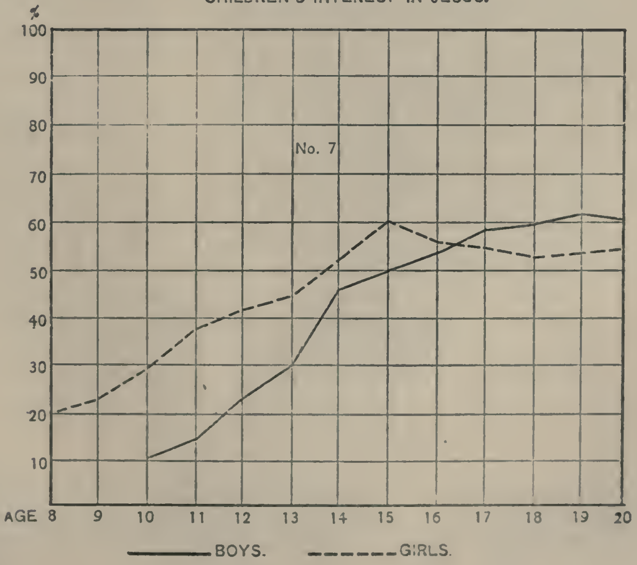
[1] *Barnes's Studies in Education*, p. 90.

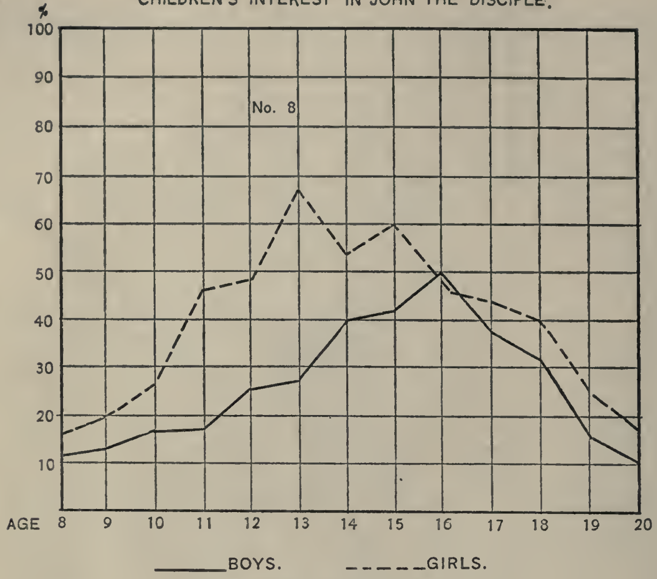
[2] *Education*, Vol. XVIII.

The boys express no preference for Jesus until the 10th year. Beginning at this age with 10%, their interest increases somewhat rapidly up to 14, and then less rapidly throughout the remaining years included in the study. From 17 years on, approximately, 60% of the boys include Jesus in their list of preferences. The girls' interest begins with 20%, at 8 years, and rises steadily up to the 15th year, when it stands at 60%. Thereafter, it declines somewhat, although remaining throughout above 50%. Generally speaking, therefore, the interest in Jesus is an *adolescent* interest, manifesting itself strongly at the beginning of that period and continuing throughout. The interest in John the Disciple, on the other hand, covers a shorter period. It is mainly an interest of *early adolescence.* In the case of the girls, it rises sharply from 10 years on, culminating at 13, with 68%. The boys' interest rises less abruptly, reaching its culmination in the 16th year, with 50%. Thereafter, in both both boys and girls, the curve of interest falls rapidly. Finally, the interest in David is, in general, a *pre-adolescent* interest. It is strongly manifested from 9 to 12, reaching approximately its highest point at the latter age, in the case of the girls, and then remaining constant up to 15, when it falls off rapidly. The boys' interest culminates at 14, when it also declines, the percentage of both sexes falling to zero in the 19th year. These results will appear more clearly in the following diagrams.

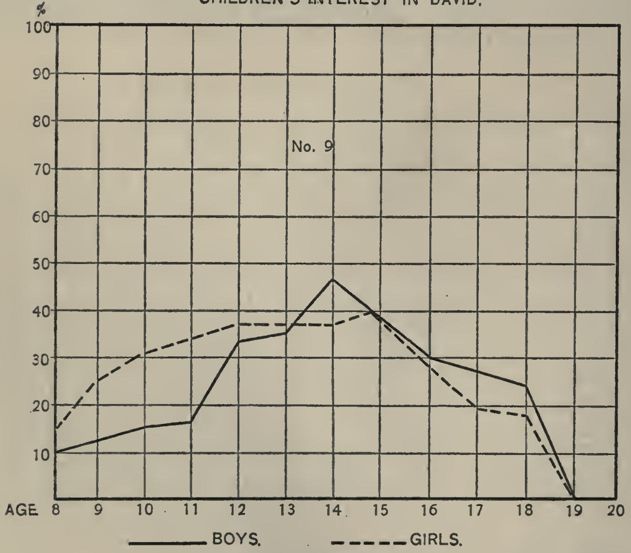
CHILDREN'S INTEREST IN JESUS.



CHILDREN'S INTEREST IN JOHN THE DISCIPLE.



CHILDREN'S INTEREST IN DAVID.



We have, therefore, the outstanding fact that children's interest in Jesus, as an adult, is an adolescent interest. This is what we should expect from the numerous tendencies of this period of life, elsewhere referred to. In considering the general interest of adolescents in the New Testament, we found that this runs parallel with the ripening of the altruistic and reflective consciousness. Thus, it is the opinion of those who have studied the religious aspects of adolescence that the character and teaching of Jesus appeal strongly to the adolescent mind. Lancaster[1] says: "Adolescents will sacrifice and perform duty for the Master as at no other time of life. Instruction should take the form of an appeal to free, spontaneous loyalty to the King, and Jesus should be presented as the ideal, heroic God-man. His self-sacrifice and self-denial, his suffering and passion may be taught with the assurance that they will appeal most strongly to the soul-life of the adolescents."

This intrinsic attractiveness of the personality of Jesus for young people, appears in what is called conversion. The meaning attached to the latter by evangelical Christianity is essentially the acceptance of Jesus as a personal Saviour. As has already been pointed out, statistical studies of conversion show that this is an adolescent phenomenon. Starbuck[2] found that the curve of conversion reached its maximum at 16, for both sexes, though a considerable percentage of conversions among the girls took place in the 13th year. Gulick[3] found that the maximum for boys was reached in the 18th year, with a large number falling in the 16th year also. In general, these investigations show that most young people who enter the church, do so in the first half of adolescent life. This virtually coincides with the period of maximum interest in Jesus, as shown in diagram 7. The attractiveness of Jesus for adolescents is therefore but one of a large class of phenomena, which the investigation of adolescent life is bringing to light. It would seem to afford another and weighty reason for concluding that this period of life is the time when the human soul spontaneously opens to the ideals of character and conduct which Jesus represents.

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[1] *The Psychology and Pedagogy of Adolescence, Pedagogical Seminary*, Vol. V, p. 128.

[2] *Psychology of Religion.*

[3] *Association Outlook*, Vol. VIII, pp. 33-48.

CHAPTER III.

CONCLUSION.

The most general conclusion growing out of this study of children's Bible interests, is that it confirms the results obtained from similar studies along other lines, and is, in turn, confirmed by them. This fact goes far towards offsetting any suspicion as to method or completeness of data. It cannot be accidental that children's interest in the Old Testament falls mainly in a period of life which experimental studies of children's mental aptitudes, as well as their historical, geographical, reading, play and other interests, have shown to be characterized by just the instinctive tendencies and intellectual qualities that the material of the Old Testament most powerfully appeals to. Nor can it be accidental that adolescent interest in the Gospels, and in Jesus, runs parallel with the general altruistic and religious interests brought to light by the various studies of adolescence. It seems to me, therefore, that this concurrence of results does two things: (1) It vindicates the point of view and method of the present study; and (2) it serves to strengthen the conclusions which the study suggests. These conclusions are as follows:

1. Children up to 8 or 9 years are more interested in the portions of the New Testament which give accounts of the birth and childhood of Jesus. They are interested, however, in Old Testament stories relating to the childhood or youth of characters like Moses, Samuel, Joseph and David. This suggests that children of this age should be given instruction in the Bible from the view-point of the childhood of the Bible, beginning with Jesus and using the others for purposes of comparative study. Of course, such material would serve only as the nucleus of the primary curriculum. Around this could be grouped a great diversity of material derived from studies in nature, art, industries, and other departments of human life, so selected and presented as to give the children a religious outlook upon their environments. A great deal of the material of the corresponding grades of the public schools could be appropriated, and given an ethical and religious interpretation. This could be done most effectively, as it seems to me, through the medium of this great world-soul, who summed up in his character and life all the most fundamental human interests, who came into the world through the gateway of childhood, and who said: "Suffer little children, and forbid them not, to come unto me, for of such is the kingdom of heaven."

2. From 9 years, on to 13 or 14, children are more interested in the Old Testament. This interest shows itself more especially in a fondness for the historical books, the literary and prophetic books, and the heroic and dramatic elements gen-

erally. This suggests that the religious curriculum for this period should occupy itself with the history, geography, literature, prophecy, and general moral and religious contents of the first division of the Bible. It would coincide with the grades of public school work above the primary and below the high school, in that it would deal essentially with *fact-studies*. It would really mark the beginning of formal biblical instruction, the instruction of the earlier period being more general and unsystematic. The order of material would be: (1) history and geography, (2) literature, and (3) prophecy. The moral and religious elements would be involved throughout. Incidentally, the history of other ancient peoples, and, at least the elements of comparative religion could be taught. Much might profitably be made of the manners and customs, and the social life, especially as reflected in the industries, religious and political ceremonials, and feats of arms. Sacred art might be brought into requisition to aid in the study of characters and customs. This is the period for memorizing selected passages of scripture, such as Psalms, Proverbs, etc.

3. Children in the adolescent period show a decided interest in the New Testament, especially in the four Gospels and the Acts of the Apostles. They also show a very special interest in Jesus and the principal Disciples. The interest in John the Disciple, is an early adolescent interest, while the interest in Jesus culminates somewhat later, and is sustained throughout. This suggests that the material of instruction for adolescence should be derived largely from the New Testament. It would center in Jesus and his teachings, the principal Disciples being studied incidentally. The study of types of Christian character and the development of Christian thought and institutions might very profitably be extended to the later history of Christianity. Every possible side-light of history, literature, art and science could be utilized in revealing the ideals of Christian manhood and Christian society. The religious instruction of this period should, it seems to me, aim to establish a correct personal relationship with the Divine Father and with society. Altruistic and religious feelings should be made use of to stimulate and guide a spirit of co-operation with God and men.

4. At all ages, children feel more interest in persons than in any other elements of the Bible. Even Bible scenes and stories appeal to them mainly through the man, woman, or child that is the center of the scene or the principal actor in the story. This suggests that the Bible should be given to children, of all ages, through its personal element. Thus, the Bible should be given to young children through the child Jesus. Everything in either the Old or the New Testament that could be properly used to make this human child Jesus intelligible and lovable should be employed. No theological

explanation of his birth, nature, or mission need be attempted. The spontaneous love of one child for another may be trusted to give Jesus a secure place in the affections of children, if he is presented simply and attractively. And it is better that the affections should be enlisted in this matter than the intellect. God, whom the little child should have already come to know through its sense of causality as instructed by older people, may be given anew to it as the Father of this Child of Bethlehem, whom so large a portion of mankind love and serve. But, whatever the theological belief of parents or teachers, there can be no economy, at this early period, in making God and Jesus the persons of a mystical trinity. They should be kept separate in the child's thought, as Father and Child, each standing for what such terms connote. Any attempt to invest Jesus with the mysteries of divine incarnation and sacrificial function must, it seems to me, detract from his simplicity and lovableness in the estimation of little children.

Again, the Bible should be given to children from eight or nine years, on to thirteen or fourteen, through the heroes of the Old Testament. These heroes may be selected with especial reference to their importance to history or prophecy, or with reference to their moral and religious example. The number is sufficiently large to give ample choice in these directions. When such a selection of heroes has been made, their characters, deeds, and sayings may become the media through which the children shall be taught Hebrew history and geography, moral and religious principles, and anything else that the Old Testament can supply for purposes of religious instruction. Finally, the Bible should be given to adolescents through Jesus as an adult, and, incidentally, through the disciples and apostles who have interpreted his character and teachings. Here, again, all historical or geographical material, all doctrines and exhortations, all individual and social elements of ethics or religion that the New Testament presents, should be taught through the personal medium most closely identified with them. In Trinitarian circles, this would be the time to give the theological interpretation of Jesus' character and function. Having established the human Jesus in the affections of childhood, and having guided the child throughout the intervening years along the lines of a healthy, normal life which finds the fulfillment of its ideals in this same Jesus, any doctrines of the Godhead or the atonement that may seem necessary to a religious philosophy, may be added. In any case, the spontaneous interest in Jesus should be seized upon to bring the adolescent lives into harmony with him, and to make his teachings effective in establishing a correct regimen of conduct as it affects the self and others.

THE COLLECTING INSTINCT.

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The "treasures" of children are cherished by them with feelings of sacredness, pride and importance which can hardly be appreciated by the adult, unless he be blessed with a bit of foolish sentiment himself or possessed of a vivid memory penetrating back into the recesses of his own childish heart. Even more than in the single object of affection,—the pet chicken, the especial pride of a top, the beloved scrap of colored ribbon, the little shining stone fostered almost as a fetich,—the "treasure" feeling in children seems to expand and thrive especially when bestowed upon a collection of objects, objects which are not only a possession, like the single cherished fetich, but a seemingly great possession, commanding the admiration which repetition and numbers always invoke, and a possession, too, that may be compared proudly, or at least stimulatingly, with similar possessions of childish compeers and rivals. The single fetich treasure twines about the heart in a more or less indefinable, unreasoning sort of way. It strikes a cord of fancy or sentiment, perhaps through some association, or perhaps merely as a fragment seemingly unrelated to any other feeling and not based on any reason. But the collection treasure arouses, besides, and along with, the tender feeling or feeling of kinship and close relationship between "me" and "my possession," a more objective interest, based on more definable, even if more varied motives.

A study of the collecting instinct, craze, fad or interest, however one may choose to designate this wide-spread phenomenon, is the object of this paper. Mrs. Annie Howes Barus[1] has given an interesting biography, recorded from observation, of her own little boy's passion for bottles, beginning in his first year as a fear and mystery fetich-feeling for a particular huge green bottle, and developing into an affection for bottles in general and love of many bottles. Professor Earl Barnes[2] contributes a reminiscent study based on the recollections of ninety-two adults, and

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[1] The History of a Child's Passion. The Woman's Anthropological Society, Washington, D. C. Bulletin No. IV.

[2] Studies in Education, No. IV, p. 144.

Sarah Wiltse and Dr. G. Stanley Hall[1] have also made a study from a large amount of data.

The data which I wish to present here have been gotten from the reports of children themselves. A certain 5th grade in the schools of Santa Barbara, California, exhibited in connection with their nature study and history work a very lively interest in collections, and all the children were anxious to tell of their birds' eggs, their Chinese coins, their Indian arrows, and to bring specimens to the schoolroom. This collection interest had developed in the children spontaneously and its extent and intensity were a surprise. In order to gain more definite information in regard to the nature of this interest, the children were asked to make out a list of all the things they had ever collected, tell when they began and when they stopped any collection, give the number of objects in each, and tell also various things about them, as will be discussed later. The results proved so fertile that a set of questions was made out and given to most of the teachers in the city to be filled out by the children, and a similar set was gathered from school children of Santa Rosa. Several days were allowed in order that they might have time carefully to think up, look up and count up their collections, and jog the memory of their mammas, also, as to their past collections. In some cases, as when an enterprising youth of ten years recorded sixty-six collections, fifty-five of them still continuing, the teacher herself consulted the mother and made sure that all were verified.

Records were obtained from 510 Santa Barbara children and 704 Santa Rosa children, in all 607 boys and 607 girls, or 1,214 children.

The universality of the collecting interest was strikingly brought out. Only ten per cent. of the boys and nine per cent. of the girls were not actively making collections at the time, while but three per cent. of the boys and one per cent. of the girls said they had never made any collections, slightly fewer girls than boys being exempt.

The intensity of the collecting interest is shown in the number of collections made, as given in the following tables (I and II).

TABLE I.

Present and Past Collections.

Boys.	2,874	Collections.	Average to the	boy.	4.7	Collections.
Girls.	3,261	"	" "	girl.	5.4	"
Children.	6,135	"	" "	child.	5.1	"

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[1] *Ped. Sem.*, pp. 234-5.

TABLE II.

Present or Active Collections.

Boys.	1,937	Collections.	Average to the boy.	3.2	Collections.
Girls.	2,115	"	" " girl.	3.5	"
Children.	4,052	"	" " child.	3.3	"

It will be seen that the girls slightly exceed the boys in the average number of collections made, as well as in the number of them making collections.

That the children on the average were in process of making from three to four actual collections bespeaks a considerable amount of energy being drained off through the channels of this instinct. But the generalities of the average cover up the "spots" where the instinct breaks out with remarkable intensity. There were six boys and ten girls making nine collections each; seven boys and four girls making ten collections each; three boys and five girls making eleven collections each; one boy and two girls making twelve collections each; one boy making thirteen collections; one girl making fourteen collections; one, sixteen; one, eighteen; one, thirty-two; and one boy making fifty-five.

The age development in regard to the number of collections made is worthy of notice. The following table (III) and chart (I) show the variation of the average number of actively continuing collections, for ages from 6 to 17 years.

TABLE III.

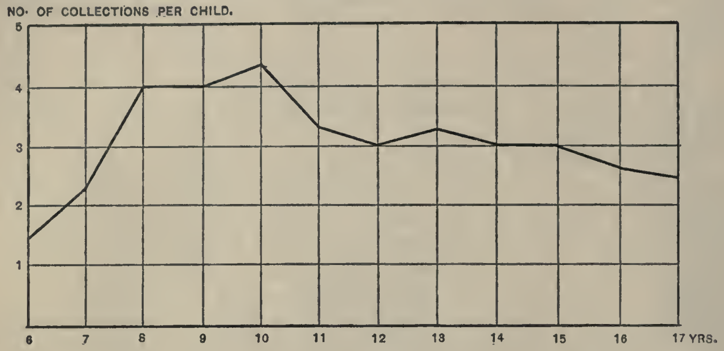
Average Number of Active Collections for Different Ages.

Age.	Average per Boy.	Average per Girl.	Average per Child.	
6 years.	1.2	1.9	1.4	Collections.
7 "	2.1	2.6	2.3	"
8 "	3.5	4.5	4.	"
9 "	3.9	4.1	4.	"
10 "	4.4	4.4	4.4	"
11 "	3.4	3.3	3.3	"
12 "	3.	3.	3.	"
13 "	3.5	3.4	3.4	"
14 "	3.	3.	3.	"
15 "	2.7	3.2	3.	"
16 "	2.1	3.3	2.8	"
17 "	2.	3.	2.5	"

The impulse to collect, as shown by the reports on past collections, manifests itself at an early age, at least by three years. It develops rapidly from six years on and reaches its greatest intensity from eight to ten or eleven years, being strongest at ten years; then it continues with moderate force into adolescence. From fourteen years on the boys show declining inter-

CHART I.

Average Number of Active Collections per Child for Different Ages.



est, while the interest of girls continues more steadily. The high-tide mark is shown by the average number of collections at ten years, being then 4.4 collections for both boys and girls.

The question as to what children collect, is best answered by asking what they do not collect. The consciously applied genius of man could hardly concoct a more numerous and diversified set of objects,—objects ranging from the utterly absurd, the useless, the grotesque, to the really valuable; ranging from the commonest, meanest things to the rarest; objects appealing to all sorts of interests and allied with a variety of motives.

The following alphabetical list of nearly three hundred varieties of collections serves well to impress the vagaries of the collecting instinct, to show how, in its intensity, it squeezes into any little channel that circumstance may open up. The classification is of course somewhat arbitrary. I have given as far as possible the specific collections as reported by the children. For instance, doll-buggies, doll-dresses, doll-dishes, doll-hats, and doll-quilts might be summed up under doll-belongings, but the children gave them separately. While, on the other hand, the term, pictures, might be divided into numerous classes, as funny pictures, pictures of noted men, of actresses, of poets, of singers, of babies, of animals, of flowers, war pictures, warship pictures, fashion pictures, mythological pictures, all of which were mentioned by the children. But as the majority who collected pictures simply gave the general term, I have combined under it all these special terms.

The boys and girls show about an equal variety in kinds of collections, the former making 215 different kinds and the latter 214.

TABLE IV.

List of Collections with number of Boys and Girls making each kind.

	BOYS.	GIRLS.
Acorns,	4	7
Advice (bits of),	1	
Animals,	1	
Antlers (deer),	2	1
Arrowheads,	19	2
Autographs,	4	19
Autograph sentiments,		3
Badges,	23	15
Baldheaded men counted,		1
Balls,	1	
Beads,	5	39
Beans,	2	4
Bees,	1	1
Beetles,	1	1
Belts,		1
Bills,		1
Birds,	16	5
Birds' beaks and claws,	1	
“ eggs,	289	81
“ nests,	17	7
“ wings,	2	
Blocks,	4	
Bones,	5	5
Books,	40	70
“ (advertisement),		1
“ (school),		1
“ (scrap),	6	15
“ (song),		2
Booklets,		1
Bottles,	9	13
Bottles (perfume),		1
Boxes,	12	16
Bracelets,		2
Brass,	1	
Breastpins,		1
Bullets,	2	
Butterflies,	29	20
Buttons,	84	154
“ (picture),	39	32
“ (cuff),	1	1
Calendars,	7	15
Candies,		7
Cans,	1	
Cards (calling),		3
“ (cigarette),	38	16
“ (election),	36	9
“ (merit),		1
“ (picture),	57	204
“ (report),		1
“ (tally),		1
Cartridges,	13	2
Caterpillars,	1	2
Cats,	7	3
Certificates,		1
Chalk,	4	2
Charm-strings,	1	3
Chickens,	7	3
Chillicotes,	8	5
China (painted),		1
Chips,	1	
Christmas berries,		1
Chrysanthemums,		1
Cigar-box papers,	3	
Cigar-holders,		1
“ ribbons,	6	11
“ tags,	389	149
“ tins,	1	
“ stamps,	4	
Clay,		1
Clocks,	1	
Clothes-pins,	1	1
Clothes-stamps,		1
Clover (four leaf),		2
Cocoons,		2
Coins,	41	28
Compositions,		1
Cookies,		1
Coupons,	14	9
Cows,	1	
Crabs,	2	
Crystals,	4	
Cups and saucers,	3	14
Curios (Alaskan, Indian, etc.),	29	17
Dishes,	2	15
“ (broken),		11
Dolls,	1	95
“ (paper),	4	106
Doll buggies,		1
“ clothes,		17
“ dishes,		1
“ hats,		1
“ quilts,		1
Dogs,	6	2
“ (rubber),	1	
Dragonflies,		1
Drawings,	2	6
Dresses,		2
Ducks,	1	
Ear-rings,		2
Easter eggs,	1	3
Envelopes,	1	
Envelope rings,	1	2
Fans,		4
Feathers,	6	8
Ferns,	7	29
Fish,	7	6

	BOYS.	GIRLS.
Fish hooks,	1	
Flags,	8	12
Flint,	18	4
Flowers (pressed),	16	58
" (paper),		4
Fossils,		2
Frogs,	3	1
Furs,	1	1
Games,	1	3
Glass (pieces of),	17	35
Glasses,		4
Goats,	1	
Gopher skins,		1
Grass,	1	3
Guns,	1	
Hair (locks of),	5	17
Handkerchiefs,	1	1
Hats,	2	1
Hat-tips counted,		4
History scraps,	1	
Horses,	1	
Horse hair chains,	12	6
Horse shoes,	16	7
" shoe nails,	4	
Horses counted, white,	6	41
Insects,	9	4
Invitations,		1
Iron,	3	
Jackstones,		1
Jewelry,		8
Jugs,		1
Keys,	1	
Kites,	2	
Knives,	7	
Knots in ropes,	1	
Labels,	7	
Lace,		4
Lead,	4	
Leaves,	40	68
" (decayed),		1
Letters,	4	10
Lizards,	1	
Magazines,	4	9
Maps,	3	1
Marbles,	221	136
" (agates),	25	3
Match-box tops,	1	
Matches,	1	1
Medals,	2	1
Mice,	1	
Minerals,	22	10
Money,	10	10
Monkeys,	1	
Monograms,		5

	BOYS.	GIRLS
Moss (sea),	19	58
" (wood),	3	7
Music,	1	2
Nails,	3	1
Names (authors'),		1
" (of books read),	1	
" (Christian),		1
" (of legal holidays),	1	
Napkins,	2	24
Neckties,	2	
Needles,	1	1
Newspapers,	5	4
Newspaper covers,	1	
" scraps,	1	9
Nickles,	1	
Nuts (Chinese),	1	
Nutshells,	1	
Oak balls,	1	
Oil cans,	2	
Opals,		1
Padlocks,	1	
Paints,	1	
Pans,	1	
Pant-guards,	1	
Paper (colored),	1	10
" (tissue),	2	4
Paper articles,		1
Papers (French),		1
" (school-work),	1	5
" (Sunday school),	1	7
" (perfect),	1	
Peas (wild),	2	
Pebbles,	15	41
Pencils,	2	6
Pennies,	1	5
Pens,		3
Periwinkles,	1	
Pets,		3
Photographs,	8	25
Pictures,	58	132
" (kodak),	4	13
Pieces of calico, cloth, silk, velvet,	6	110
Pieces for quilts,		14
Pinks,	1	
Pigeons,	25	8
Pins,	10	31
" (hat),	2	3
" (scarf),	1	
" (stick),		6
Plants,	7	19
Poems,	2	23
Polliwogs,		2
Postal cards,	1	
Posters,		2

	Boys.	Girls.
Postmarks,	2	8
Programmes (theater, dance, etc.),	4	5
Puzzles,	2	4
Quartz,	2	
Rabbits,	27	12
Rabbit ears,	1	
Rags,	2	16
Rats (white),	6	1
Red headed girls counted,		1
Ribbons,	8	58
“ (men-of-war),	1	
Riddles,		3
Rings,		3
Rocks,	67	53
Rose petals,		4
Rubbers,	1	
Rubber (sheet),		1
Sachet-bags,		1
Sacks,	5	1
Sayings (witty),	2	7
“ (of all descriptions),		6
Seals,		3
Seeds,	6	8
Shark eggs,	1	
Shells,	113	223
Shoes (old),		1
Shot,		1
Silk-worms,	2	2
Skeletons,	1	
Skins,	3	
“ (rattlesnake),	1	
Sloyd models,	11	
“ sewing,		4
Snake eggs,	1	1
Soils,		1
Songs,	1	16
Souvenirs,	3	14
Spiders,		1
Spools,	18	22
Spoons,	1	15

	Boys.	Girls.
Stamps,	365	240
Star-fish,		2
Sticks,	1	
Stingaree stings,	1	
Stones,	42	36
Stories,	2	5
Strings,	6	23
Tags (shipping),	1	
“ (tin),	2	
“ (tobacco),	32	10
Teeth (cats'),	1	
Thread,		1
Tickets,	2	1
Tiles,	1	
Time-tables,	1	
Tin,	1	
Tintypes,		2
Toads,	1	
Tobacco sacks,	1	
Tools,	4	
Tops,	38	3
Toys,	4	1
Trade marks (soap, etc.),	2	2
Trees,	3	
Turtles,	10	1
Valentines,	1	3
Vases,		3
Vegetables,	3	
Wagon wheels,	1	1
Walnuts,	1	
Wampum,	3	
War relics,	1	
“ (pieces about),	1	
Water (colored),		1
“ -colors,		2
Weapons,	1	1
Woods,	15	3
“ (petrified),	3	2
Wrappers, (fruit, yeast, etc.),	1	3
Zoölogical specimens,	1	1

Prominent Collections.

Certain collections stand out much more prominently than others, especially cigar-tags, stamps, birds' eggs, marbles, and shells. These are prominent among both boys and girls, though all but shells much more so among the boys. Certain collections rank high, but more particularly among the girls, as picture-cards, pictures, buttons, pieces of cloth, silk, etc., dolls, paper-dolls. Then follow some, as books, rocks, leaves, flowers, ribbons and others, which have a fair following. The remaining classes of collections were made by only a few children, and ninety-seven kinds were made by only one child each. Table V gives a list of the more prominent collections with the percentage of boys and girls who were making or who had made them.

TABLE V.

Prominent Collections and Proportion of Children Making Them.

	BOYS. PER CT.	GIRLS. PER CT.		BOYS. PER CT.	GIRLS. PER CT
Cigar-tags,	64	24	Sea-mosses,	3	10
Stamps,	60	39	Flowers,	2	10
Birds' eggs,	47	13	Ribbons,	1	10
Marbles,	36	22	Stones,	7	6
Shells,	18	36	Pebbles,	2	7
Picture-cards	9	33	White horses counted,	1	7
Pictures,	9	22	Picture-buttons,	6	5
Buttons,	14	23	Coins,	6	4
Pieces of cloth, etc.,	1	20	Pieces of glass,	3	6
Paper-dolls,	1	17	Butterflies,	5	3
Dolls,		16	Election-cards,	6	1
Books,	7	12	Beads,	1	6
Rocks,	11	9	Spools,	3	4
Leaves,	7	11	Badges,	4	2
			Strings,	1	4

It will be seen that the boys concentrate more on a few things which run as crazes through very many of them. About three-fifths of the boys had collected cigar-tags and stamps, and nearly half of them had collected birds' eggs. Nothing attains such wide-spread interest among the girls, although between thirty and forty per cent. of them had collected stamps, shells and picture-cards, but a greater number of things have considerable runs with the girls. The table shows that only seven things were collected by ten or more per cent. of the boys,—cigar-tags, stamps, eggs, marbles, shells, buttons and rocks, while sixteen things were collected by ten or more per cent. of the girls, the same things as in the case of the boys, except rocks, and also others, all in the following order: stamps, shells, picture-cards, cigar-tags, buttons, pictures, marbles, pieces of cloth, etc., paper-dolls, dolls, eggs, books, leaves, sea-mosses, pressed flowers and ribbons.

COLLECTIONS MADE BY BOYS OR GIRLS EXCLUSIVELY.

Certain kinds of collections, eighty in all, are found only among the boys, and certain kinds, seventy-nine in all, only among the girls, one hundred and thirty-five kinds being common to both. Only boys report such collections as birds' beaks, claws, and wings, crabs, dogs, ducks, goats, lizards, mice, monkeys, rabbit-ears, shark eggs, skeletons, rattlesnake skins, cats' teeth, toads, in the way of animals; brass, bullets, cigar-tins, clocks, crystals, horseshoe nails, iron, keys, lead, nickles, oil-cans, padlocks, paints, pans, quartz, tin, tiles, in the way of mineral and mechanical miscellanies; blocks, balls, fish-hooks, guns, kites, knives, tools, in the line of toys; war relics, pieces about the war, history-scraps, names of legal holidays, in the historical line; neckties and scarf pins, in the way of toilet articles. Only girls mention autograph sentiments, calling cards, report cards, tally cards, invitations, monographs, tintypes, in the line of things savoring of the souvenir sentiment; belts, perfume bottles, bracelets, breastpins, dresses, ear-rings, fans, jewelry, lace, sachet-bags, stick-pins, in the line of toilet articles; painted china, posters, paper-flowers, jugs, vases, in the decorative line; bald-headed men counted, red-headed girls and hat-tips counted, and four-leaf clover, in the way of luck collections; and doll belongings, in the way of toys.

Individuality Versus Imitation and Fads.

Without doubt the collecting instinct, if such we may call it, is largely dependent on imitation as its tinder. There are large blazes that spread rapidly and widely, and small blazes that still affect their many. The elements of imitation and its specialized form, faddism, are unmistakable. Five-sixths of the six thousand collections reported were, each, one of from ten to three hundred or so similar collections in the same town. About one-sixth, or a thousand collections, were in runs of less than ten in the same town, showing some considerable individual independence. Ninety-seven children, as already mentioned,—fifty-five boys and forty-two girls,—or eight per cent. of all the children, made collections reported by no other child—collections that were the product of individual fancy. If we found the most wide-spread crazes among the boys, as in the case of cigar-tags, so, too, we find, on the other extreme, slightly more marked individuality among them. Some of the collections to which only one child stood sponsor were bits of advice, chips, rubber dogs, envelopes, knots in ropes, match-box tops, names of books read, Chinese nuts, nut-shells, oak-balls, pant-guards, perfect papers, rubbers, stingaree stings, time-tables, bills, advertisement books, merit cards, dragon-flies, gopher skins, jackstones, decayed leaves, Christian names, old shoes, soils, shot, spiders.

Distribution of Interests.

While a study of the collections of specific objects may show, perhaps, the influence of imitation and circumstance and environment, a combination of the heterogeneous varieties of collections under a few general headings may show real trends of interest and inclinations of mind. For instance, we find that the Santa Barbara children, living in daily contact with the sea-beach, collected more shells and sea-moss than the Santa Rosa children, who, living in an interior, agricultural valley, depend solely on summer vacations for their acquaintance with the ocean and its treasures. This is the result of environment. But we should hardly conclude anything as to general nature interest from these two collections alone. The Santa Rosa children may show their nature interest in channels more in accordance with their own immediate environment; as, for example, we find bird egg collections in excess there. But a combination of all the nature collections in both places will in some measure indicate the comparative place the nature interest occupies among other interests. This combination I have made, and also a separate grouping of the animal, plant, and mineral collections. Under animal collections we have birds, birds' eggs, nests, wings, insects, rabbits, pigeons, and other animals, silkworms, skins, furs, etc.; under plants collections, ferns, flowers, leaves, woods, moss, seeds, grass, etc.; under mineral collections, minerals, shells, rocks, stones, pebbles, flint, quartz, petrified wood, etc. Besides the nature collections I have combined the other collections under eleven further headings, as shown in Table VI, which gives the proportion of collections found under each. The percentages are made on the whole number of collections. A few of the headings need illustrative explanation. Playthings include dolls, marbles, tops, tools, guns, kites, etc. Under "literary" are placed books, magazines, poems, sayings, stories, etc.; under "historical" there are curios (Alaskan, Chinese, Indian), arrowheads, historical scraps, pieces about the war, etc. "Personal adornment" embraces ribbons, hats, stick and breastpins, lace, fans, feathers, neckties, dresses, etc.; "sentimental:" locks of hair, autograph sentiments, valentines, souvenirs, etc.; "useful:" quilt pieces, handkerchiefs, spoons, cups and saucers, etc. The "miscellaneous trivial" collections are those chiefly of the younger children, of things such as bottles, sticks, strings, boxes, pieces of cloth, etc., which seem to be more or less purposeless, and which are easy to obtain. The second heading is a specific one: "cigar-tags, stamps, etc." No general term seems to cover these collections. Badges, picture-buttons and others are included, and all seem in a way related. These things, like the miscellaneous trivial things, are easy to obtain, but at the same time there is a sort of official importance about them that perhaps appeals; they have the fascination, too, of connection with the outside world; and their quantities and currency quality facilitate the interesting transaction of trading.

TABLE VI.

Distribution of Interests, Shown by the Relative Proportion of Various Groups of Collections.

COLLECTIONS.	OF ALL CHILDREN. PER CT.	OF BOYS. PER CT.	OF GIRLS. PER CT.
Nature,	29	32.4	26
Cigar-tags, stamps, etc.,	24	33.8	16
Miscellaneous trivial,	12	8	15
Playthings,	12	11	12
Pictures,	10	6	13
Literary,	3	2	5
Historical,	2	3	2
Personal adornment,	3	1	5
Sentimental,	1.3	.7	2
Useful,	1.3	.6	2
Luck,	1	.8	1.5
Unclassified,	1.4	1.7	1.5

TABLE VII.

Distribution of Nature Interest.

COLLECTIONS.	BOYS. PER CT.		GIRLS. PER CT.	
Animal.	17.6	32.4%	6	26%
Plant.	4.9		9	
Mineral.	9.9		11	

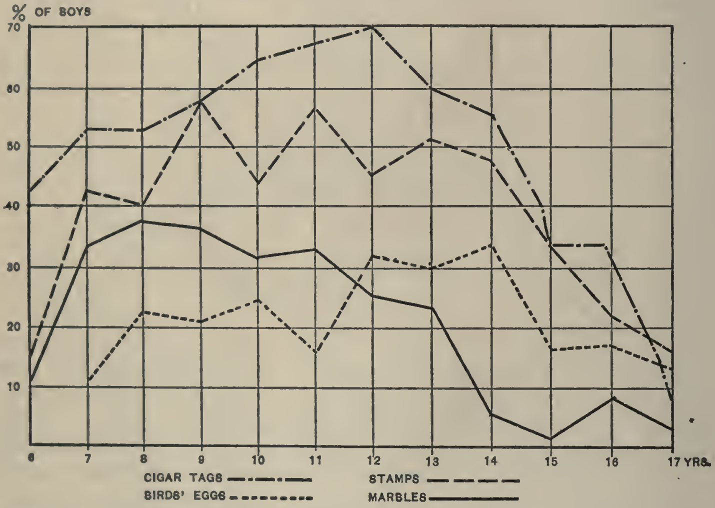
Taking the boys and girls together it is interesting to notice that the nature interest ranks highest. With the boys, by themselves, the cigar-tag, stamp, etc., interest leads the list, but this is practically equalled by the nature interest. In the nature line (see Table VII), interest in the animal world far exceeds that in the plant and mineral worlds, with the boys. Minerals rank next, then plants, while with the girls the order is mineral, plant, animal. The next greatest number of collections with the boys is in the line of playthings; then come miscellaneous trivial things and pictures; literary and historical interests follow with modest steps. With the girls the nature interest ranks higher than that in cigar-tags, stamps, etc. Miscellaneous trivial things come next, then pictures and playthings, followed by the other classes in much less degree. Boys exceed girls greatly in the cigar-tags, stamps, etc., collections, considerably in the nature collections, and very slightly in the historical collections, while girls exceed boys in the other classes except in playthings, where both have an equal interest. In the subdivisions of nature collections, boys exceed girls only in the animal collections.

AGE DISTRIBUTION OF INTERESTS.

Some of the collections are found at all ages, beginning in childhood and lasting on into adolescence. Others show an especial prominence at certain ages. We may notice the age distribution of a few of the more prominent collections. Chart II shows the progress of interest among the boys in their four prominent collections, cigar-tags, stamps, marbles, and birds' eggs. The percentages show the proportion of boys collecting at each age.

CHART II.

Percentage of Boys Collecting Cigar-tags, Stamps, Marbles, and Birds' Eggs, at Different Ages.



The marble collection begins at least by six years, with a small number of followers, and reaches its height from seven to ten years, but especially at eight and nine years. After this age it declines, and from thirteen years on plays a small part. Stamps hold their own from seven to fifteen years, declining thereafter. The prominent ages are from nine to fourteen years. Cigar-tags are rather full-fledged at as early an age as six years. The craze increases, reaching its greatest intensity at twelve years, and then diminishes, dying out practically at sixteen years. This collection is prominent through a greater number of years than any other collection. The bird egg fever begins mildly at seven years and increases, reaching its height from twelve to fourteen years.

The greatest intensities of these four collections seem to follow each other like the crests of succeeding waves. The marble crest, at eight and nine years, is followed by the stamp crest from nine to eleven years, then comes the cigar crest at eleven and twelve years, and then the birds' egg crest from twelve to fourteen years. The cigar-tag craze remains highest through all ages, the stamp craze next highest through all ages. The marble line of interest and that of birds' eggs cross between eleven and twelve years and supplement each other.

With the girls the interests in stamps, cigar-tags and birds' eggs follow about the same lines as with the boys, reaching their heights a little earlier if anything, while the greatest interest in marbles comes a year or so later.

Noticing now other nature collections besides birds' eggs, we find that rocks are about the first to appear upon the scene. The little child of four seizes upon crude, irregular bits, lumps and masses. Beauty, form, and color seem to play little part at first. The collecting of rocks continues until about ten years, and in the latter part of this period is largely superseded by the collecting of smoother stones, often "colored stones" and "pretty stones." In contrast with crude rock-lumps, the collection of pebbles begins also at three or four years, and lasts about the same length of time. Leaves have their dominant period before ten years, while flowers, sea-mosses and shells, come especially between eight and eleven years, chiefly with the girls, and butterflies at this age with the boys. Spontaneous nature interest, as far as collecting goes, seems to be especially from eight to eleven years. Birds' eggs are about the only nature collection that continues to show any prominence in adolescence.

The collection of miscellaneous trivial things,—buttons, spools, strings, glass, beads, pins, broken dishes, etc.,—begins at about three or four years of age, and lasts to about seven or eight years. The collection of picture-buttons is an adolescent affair, together with badges. Doll collections, beginning at three or four years, reach their height at nine or ten years, while paper-dolls are strongest a year or so later. The collection of pieces of cloth follows the trail of the doll interest, and is superseded in early adolescence by that of ribbons. Picture-cards rage from four to eleven years of age. Pictures have two periods: the childhood period of scrap-book pictures up to nine or ten years, and the adolescent period of better pictures from twelve years on. The interest in books begins at about eight years, and continues through adolescence. The "luck" interest is from eight to twelve years. The "historical" interest comes from eight to thirteen years, continuing into adolescence.

STAGES OF DEVELOPMENT IN THE CHILD.

Looking now at the age progress from the standpoint of the child rather than of the various collections, we may combine the prominent interests of each age and note certain well-marked stages of development in the collecting mania. Up to eight years of age the collecting impulse is crude, groping, undirected. Collecting at this period seems to be an instinct rather than an interest. Things are collected which are absurd, valueless, trivial, mechanical, scrappy, simple and easy to lay hands upon. There are bottles, boxes, pins, clothes-pins, strings, sticks, matches, buttons. The crudest nature collections come at this age,—acorns, rocks, pebbles. Things which are purposeful at this age are really possessions rather than collections, as toys, dolls, doll-belongings, scrap-books, etc.

Following the childhood period is what we may call the pre-adolescent period, from eight to eleven or twelve years. Here collections reach their height in quantity and genuineness. The crude instinct seems to develop into a more conscious interest. There is more interest in the things themselves, as well as in the collecting of them. The interest is more directed, more purposeful, answers the call of inner needs more strongly. On the other hand we find the imitative element very strong at this period. On the side of "inner need" we notice that the play interest reaches its height here, as shown in the marble, doll, etc., collections, and also the nature interest is more prominent at this age than at any other, shown in the collections of flowers, stones, mosses, butterflies, shells, eggs, etc. On the side of "imitation" we find the cigar-tag and stamp crazes more wide-spread at this age than earlier or later. At this age, too, the "possession" idea of childhood seems to develop into love of quantities. The largest collections come now.

Then follows the adolescent period from twelve years, or so, on, a period not so much of interest in the things collected, not so much of large crazes and wide-spread imitation and love of quantities, as a period of social associations, a period of fad and fashion on smaller scales. The pre-adolescent child is a spontaneous naturalist,—he gathers in his quantities. The adolescent, entering into his heritage of logic and reason and understanding of relationships and of cause and effect, passes out of the "naturalist" stage; but at the same time he does not seem to develop spontaneously into the later scientific stage of digestion and classification and explanation in connection with his collections. Scientific development at this age, when the individual is less the product of the race and more susceptible to the influence, especially of human environment, needs direction and encouragement, if it would continue in its normal path. We should naturally expect collecting, which before adolescence has been more or less of an end in itself, now, if carried on, to be used as a means, as a handle, to higher scientific interests.

But such does not prove the case. For want of direction the collecting impulse in reality continues into adolescence as a vestige, as it were, a remnant, of the real instinct. It dribbles off into sentimental lines, as in the collection of party-souvenirs, theater programmes, etc.; and into social fads, as in the collection of spoons, hat-pins, etc. The spontaneous nature interest largely dies out, except in the case of birds' eggs, where other instincts, as the roaming and hunting, continue to supply incentive. The stamp and cigar-tag interests, which continue, are now closely associated with the passion for trading.

But while, in general, collecting in adolescence lingers as a degenerate form, as it were, or as a cat's paw for other passions as the sentimental and social, the hunting and the trading, still we find that it does continue as a real and genuine interest in two lines, in the literary and the æsthetic. The collecting interest is a beginning interest in any subject. Logical and analytical interest comes later. Now the nature interest develops earlier than the literary and æsthetic, in the child as in the race, and hence it is natural that the collecting period in the former line should normally precede that in the latter lines. The literary and æsthetic interests, beginning largely in adolescence, are initiated by a collecting stage. So, here, collections of books, pictures, etc., come normally, and true appreciation of them follows later. As a pedagogical conclusion we may here suggest that while nature collecting should be followed in adolescence by more analytical work, literary and æsthetic work, on the contrary, may begin in early adolescence with the encouragement of this very collecting instinct.

METHODS OF OBTAINING COLLECTIONS.

The children were asked to tell how they obtained their various collections. The data given here are from the Santa Rosa children only. The methods of getting collections simmer down to a few. The things were found or hunted for by the children themselves, that is, obtained by their own exertions, were given to them, were traded for, were bought or won. Table VIII and Chart III show the relative proportion of the methods given.

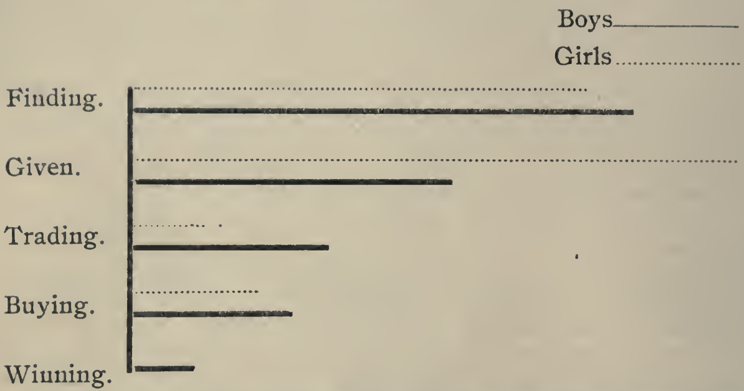
TABLE VIII.

Methods of Obtaining Collections.

	BOYS' METHODS.	GIRLS' METHODS.
	PER CT.	PER CT.
Finding,	39	36
Given,	26	48
Trading,	16	6
Buying,	13	9
Winning,	4	

CHART III.

Methods of Obtaining Collections.



With the boys the chief method of getting their collections is by their own exertions, finding them or hunting for them. Then follow "given," "trading for" and "buying." "Winning" is insignificant and applies practically only to marbles. Nearly half of the methods mentioned by the girls came under the head of "given." Then follow "finding," "buying" and "trading," the latter two being comparatively unimportant. The boys exceed the girls somewhat in finding and hunting, and considerably in trading and buying. The girls exceed the boys very greatly as passive recipients of outside assistance, in having their things given to them by brothers, sisters, parents, uncles, aunts and friends. But this excess of passivity on their part is not balanced by any special decrease in the method of finding, but it rather balances the excess of trading, buying, and winning among the boys.

These different methods vary somewhat with the different ages of the children. Charts IV and V show the trends of the various methods, one for boys and the other for girls.

Looking at the chart for boys we find that the prominent ages for being given their objects are seven, eight and nine years, after which there is a general decrease in this method. The prominent age for finding and hunting immediately follows the more passive period and comes at nine and ten years. The lines for "given" and "finding" cross just before nine years, the latter waxing greater at that time and continuing so throughout. From eleven years on the "finding" line continues rather evenly but is less than before on account of the rise of the buying and trading tendencies. The prominent ages for buying and trading follow next after those for finding, and are

CHART IV.

Methods of Obtaining Collections, according to age. Boys.

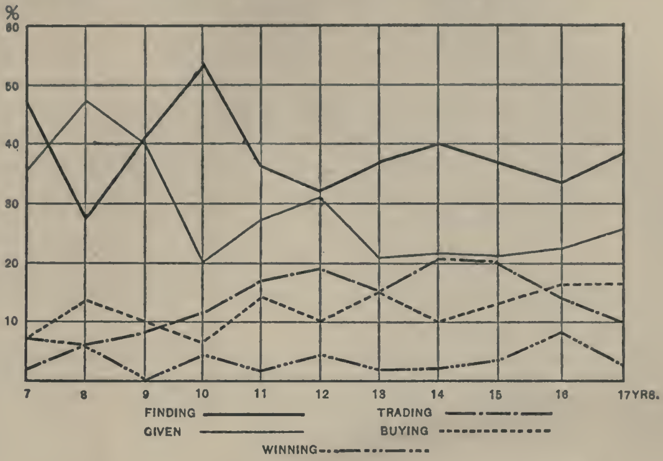
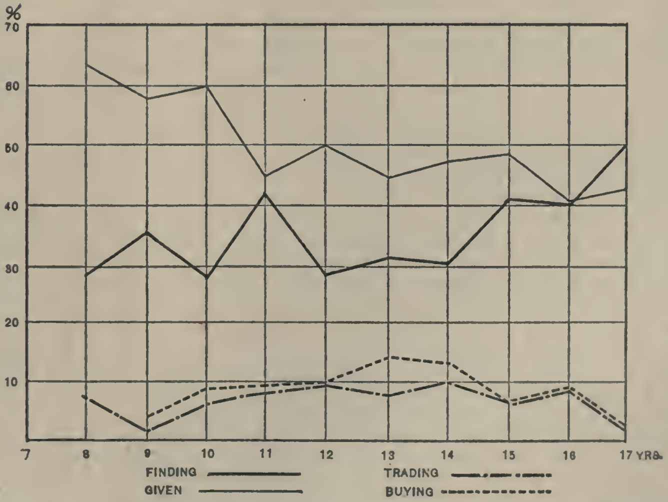


CHART. V.

Same as IV. Girls.



from eleven on through adolescence. The winning tendency maintains a humble but even course.

A succession of crests may be noticed,—the crest for "given" at seven, eight and nine years, that for "finding" at nine and ten years, those for "buying" and "trading" from eleven years on. With the girls the crest for "given" comes at eight years and those for "trading" and "buying" come in adolescence, as with the boys. The line for "finding" has a crest at eleven years, corresponding to that of the boys at ten years, but there is also another crest in adolescence.

The greatest activity among the children in obtaining their collections by their own exertions comes in the pre-adolescent period, which has already been noticed as the age of greatest intensity and genuineness of interest in collections, and also as the age of greatest interest in nature collections. With adolescence, the commercial spirit comes in to mar the naturalist spirit.

I give some of the responses of the children to the question, "How did you obtain your collections?" The first one is very typical of the younger children.

Girl, 9 years. My cousin gave me my paper dolls. My aunt gave me my box of shells. My papa and mamma gave me my picture-cards and scrap-books. And my grandma sent me my rocks. And whenever I find a pretty rock I take it home.

Boy, 10 years. You do not collect ponies. You ask your father to buy you one.

Boy, 10 years. I get some of my cigar wrappers from the cigar store and my father gives me some and my uncle too, and sometimes I ask men for them.

Boy, 10 years. In collecting cigar rings it is very hard to find many good ones, because most every boy is collecting them, but in San Francisco you can find a great many, but still the boys collect them.

Boy, 10 years. I got my marbles in playing for them and bought a few.

Boy, 10 years. I started to count white horses when I was eight years old and ended when I was nine. It brought me good luck. I got to go to a show.

Boy, 10 years. When you collect cards you can see them lying around on the streets.

Girl, 13 years. There is not much to tell about my card collecting. I simply asked my friends to get me all they could, and then if I should happen to get two of a kind I would trade with some one.

Girl, 12 years. I obtained my stamps in several different ways, hunting for them myself, buying them, getting friends to collect for me and trading with other people. I have about 600 varieties and 1,000 stamps.

Girl, 13 years. Buttons are very foolish and easy things to collect, but I had the craze as most girls do. I had my grown friends give me all the odd ones they had in their button baskets.

Boy, 14 years. During the time I have been collecting my stamps, I collected them myself. The way I got them, I traded the stamps I had twice alike, and I bought a good many. Sometimes I go in stores and buy some, and other times I send back east for them, and then I sell them off from sheets at 50% commission and take my commission out in stamps.

The replies in regard to the nature collections are the fullest and most enthusiastic, especially in the case of birds' eggs, and often give additional information about the objects collected.

Girl, 11 years. I hunted for sea mosses along the seashore, and then I wet it and put it in the sun to dry. The sea moss grows on rocks out in the ocean. When there is a storm it breaks the sea moss off the rocks, and it floats into the shore.

Girl, 11 years. I hunted for shells on the seashore. There are many different kinds of shells, and some are very pretty. There are two kinds called rice shells and coffee beans. You find these in little alcoves where the water is always washing up on the sand.

Girl, 13 years. Pebbles and shells I hunted for on beaches and the shores of Lake Tahoe, where you can find some beauties, some pure carnelians and many bright stones for polishing.

Girl, 13 years. Minerals are rather hard to collect, so I consider my collection worth a good deal, and yet I came near giving it to our school museum. I am glad now that I can still claim them. I found some of my specimens, others were given to me.

Boy, 13 years. I got most of the rocks along the railroad track, but some along the bed of the creek. I went up Mark West Creek by the railroad hunting for rocks.

Boy, 6th grade. Butterflies are quite hard to get. Sometimes when standing in the yard I would see a butterfly, then I would take my hat off and throw it at the butterfly, and that would scare it. Then I would chase it around the house a few times, then the butterfly would start off in a different direction and probably go over a swamp, and then I would wade through and get my feet wet rather than let the butterfly go. Sometimes I would run after them three or four hours.

Boy, 12 years. I got my birds' eggs by finding them. It depends upon what kind of birds' eggs you are hunting for. Some birds build on the ground, some build in trees, and some on barns and some in barns.

Boy, 10 years. I climbed trees for my birds' eggs, and looked for larks' eggs in the field. When any one is going to hunt birds' eggs he must go into the long dry grass, and there he will find larks' or quails' eggs. You should go about July or August.

Boy, 13 years. I used to live on a ranch in Colusa County. I had about 15 quail eggs. These the men who worked for my father would bring in in haying season. The quail would build their nests in the shocks where the men would find them. I had some dove eggs; these I would find after the hay was cut on the ground. I had some small owls' eggs and linnets'. The swallows made their nests in the cottonwood trees that grew around the house.

Boy, 14 years. Birds' eggs are found in the month of May. The best place to find birds' eggs is in the trees on the hills. I found all my birds' eggs myself. I had to climb way out on small limbs to get the nests.

Girl, 16 years old. I obtained my collection by hunting for the eggs and having my friends collect for me. It is very interesting to study the habits of birds, they have so many ways to build their nests. The magpies' eggs are rather hard to obtain as they build on the top of tall willows. The nest is composed of strong twigs. In shape it is round with a small opening in the top. Birds and animals have always had a great attraction for me.

Only two or three children suggest qualms of conscience in collecting birds' eggs.

Boy, 13 years. I think I like to collect birds' eggs better than anything else. But I think it is not right to take our songsters' eggs.

Girl, 13 years. I started to collect birds' eggs, but when I saw how badly the birds wanted them, I would just climb down that tree and up the next, where the same performance was apt to occur, and so I failed.

MOTIVES FOR COLLECTING.

The children give a variety of reasons as to why they made their collections, as shown in Table IX. They collected because others were collecting, because an older brother or sister, or Johnny Jones, or the "other boys," were collecting, that is, as a matter of imitation or fad.

1. Boy, 9 years. I began to collect cigar-tags because I saw the other boys collecting.

Girl. I collected stamps because every one else was.

Girl. I commenced getting pieces of calico because I heard of a little girl collecting for herself.

Boy, 12 years. Cigar wrappers, picture-buttons, stamps, government tags, election-cards, I got just because others did.

Boy, 11 years. As all the other boys were collecting stamps I thought that I would get a collection of them, just for the fun of collecting.

Boy, 10 years. I got birds' eggs because my relatives got them.

Girl. I began to collect shells because my sister was.

Girl. I collected cigar wrappers because my brother was and he wanted me to.

Girl, 13 years. The reason why I collected the dolls was because it was a fashion to play with them and have as many different kinds as possible, and I had to follow the fashion, and because I considered it great fun to play with them.

Girl, 13 years. I suppose my weakness or craze (in regard to buttons) was because I am a girl and all girls are afflicted with it sometime during their life.

Girl, 14 years. I made my collections because I wished to and because they were fads.

The influence of others is sometimes in the way of rivalry, rather than mere imitation.

Girl. Another girl and I collected glass to see who would get the most.

Boy, 9 years. I started to collect cigar wrappers because my chum started and I wanted to beat him.

Boy, 12 years. I began collecting cigar wrappers because I saw another boy collecting and so I thought I would see if I could get as many as he had.

Girl, 13 years. Cigar rings, I am ashamed to say, I commenced collecting because a girl I knew and did not like had 500 or more different kinds and I wished to get ahead of her, and I did.

Boy, 14 years. How I started to collect eggs, another boy said that he was going to collect and he would get a larger collection than I, so I began to collect them.

The interest in quantity, in numbers, is very great. To get as many as possible possesses a great attraction. Interest in quantity far outweighs interest in kind.

Girl. I collected picture-cards to see how many I could get.

Boy, 11 years. I thought I would collect election cards to see how many I could get.

Girl. I wanted to see how many cigar wrappers I could get in three weeks.

Boy, 14 years. I collected tags for the pleasure of looking at my vast numbers.

There is some interest, however, manifested in kinds, in varieties, as well as in mere numbers.

Boy, 11 years. I thought I would collect buttons and birds' eggs to see how many different kinds I could get.

Girl, 16 years. I commenced my collection with the purpose of seeing how many different kinds I could obtain and because I am interested in them.

Many vague reasons are given by the children, showing a more or less purposeless and nebulous state of mind. They "just wanted to," they collected "just for fun," they had a "good start" or an accidental start, they thought it was "nice," some one suggested the idea, the things were "easy to get," or they accumulated in some way or other. Some of the children give no reason, others say they "don't know why." All these replies I have classed in the table, under the head of "Indefinite."

Boy, 6 years. I collected just to have a collection.

Boy, 9 years. I just collected shells for fun. I just collected stones for fun.

Boy, 10 years. I found two nests with eggs and I thought if I was started I might as well collect, so I did.

Boy, 10 years. A boy said to me why did n't I get some pigeons. So I asked my father and he said yes, and I made a house and collected pigeons.

Boy. One day I climed a palm tree and I got at least twelve eggs. This made me think of collecting, so in about a month I had about 50 eggs. I did not collect for any good reason but just for the sake of saying I collected something.

Boy, 12 years. I commenced collecting election cards because I had read about it in one of the San Francisco papers.

Girl, 13 years. I do not know why I commenced collecting dolls, probably because I am a girl.

Boy, 15 years. I got into the notion.

Some collect with the idea of enjoying their collections in some way, of using them, of playing with them, or for the pleasure of looking at them.

Boy, 8 years. Marbles I began to collect because it would be fun playing with them.

Girl. Election cards. I liked to look at them.

Boy, 12 years. History scraps, puzzles, games, I got to play with on rainy days.

Boy, 12 years. Pictures of ships and famous men I got just to keep and look at.

Girl. I collected story books so I could read them when I was older.

Girl. I collected ribbons because I wanted enough to make a chair tidy.

Girl, 13 years. I commenced collecting picture-cards for the purpose of making an album.

Besides the enjoyment of the objects collected there is pleasure in the mere collecting, in the activity as a pastime.

Girl. I collected flint just for the fun of getting it.

Girl. I commenced collecting flags because I thought it would be nice to take up my idle time.

Girl. I collected dolls just for the pleasure of it.

Boy, 12 years. I got birds' eggs just to pass away the time.

Girl, 13 years. I started collecting pebbles and shells because I had nothing else to do at the time.

Differing from the use or enjoyment of the collections, is the more intellectual interest in them and desire to study them. The curiosity interest may be included under this head.

Girl. I collected birds' eggs to have them as a curiosity.

Girl. I think curiosities are nice to study about and I like to have them.

Girl. I collected plants because I liked them.

Boy, 11 years. I collected my minerals because I liked to take an interest in them.

Girl. I liked to collect pollywogs because I tried to find out all about them and see them turn into frogs.

Girl. I like books very much, and I am interested in them.

The interest in the objects collected is sometimes an æsthetic interest. The beauty of the object attracts.

Boy, 10 years. I got pebbles because they were pretty.

Boy, 10 years. I got picture cards in stores because they were pretty.

Girl. I collected shells because they are nice and pretty.

The commercial motive appear consciously to some extent.

Boy, 10 years. I collected eggs because I can sell them. In collecting rings I most always sell them. I collect stamps because when you get a set of them you can sell them for a great deal of money. You can sell flint if you chip an arrowhead out of it.

Boy. I collect stamps because the stamps that I have collected for years are worth very much money. I keep on collecting them now because I was offered for my collection twenty dollars, but they are worth more.

Objects are also collected as souvenirs, and a few other miscellaneous reasons are given, such as, for luck, for trading purposes, to give to others, to exhibit, to have or keep, for school work.

Table IX and Chart VI show the relative proportion of these various motives, and differences for boys and girls.

TABLE IX.

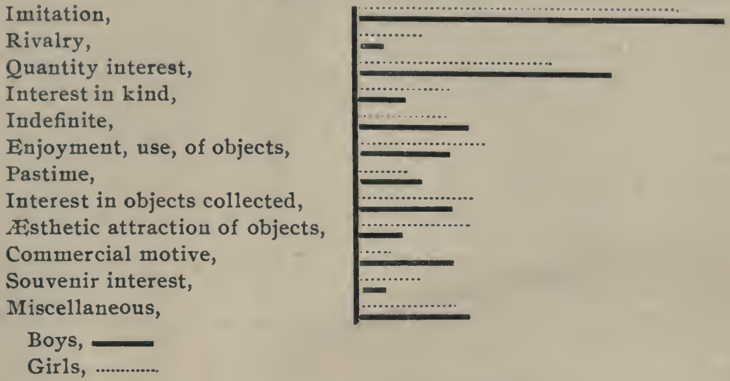
Motives for Collecting.

	Boys' Motives. PER CT.	Girls' Motives. PER CT.
Imitation. Because others did.	29	25
Rivalry. To get as many or more than others.	2	4
Quantity interest. To see how many.	20	15
Interest in kind. To see how many kinds.	3	6
Indefinite.	8	6
Enjoyment, use, of objects.	7	10
Pastime. Pleasure in collecting.	4	3

	Boys' Motives.	Girls' Motiyes.
	PER CT.	PER CT.
Interest in objects collected.	7	9
Æsthetic attraction of objects.	3	8
Commercial motive.	7	2
Souvenir interest.	2	5
Miscellaneous.	8	7

CHART VI.

Motives for Collecting.



Imitation looms up as the strongest influence in setting the collecting instinct in action. Then follows the interest in quantity, in numbers, in large possession. In contrast with imitation, or doing as others do, rivalry, or doing more than others do, seems to hold a comparatively small place, and in contrast with interest in quantity, interest in variety, in kind, is insignificant. The interest in kind and the genuine interest in the objects themselves approach most nearly to the conscious scientific attitude. The considerable percentage of indefinite reasons given seems to suggest the instinctive side of the collecting interest. Some start, some suggestion, some idea perhaps not remembered or known, supplies the incentive to an instinct that seemingly requires very little inducement to call it forth.

Some sex differences may be noticed. Boys yield slightly more to the imitative influence than girls. This has been already shown, in the record of their collections, by the fact that they exhibit more wide-spread crazes. As imitation takes on the character of faddism in adolescence, the girls give this motive oftener than the boys. Boys, too, exceed slightly in the love of quantity and large possessions. This is shown also by the fact that their collections are carried to a far greater extent than those of the girls. They often collect thousands of objects, while girls are content with hundreds. Girls show somewhat more maturity in their greater interest in kinds and in the objects collected.

Without doubt the interest in kind is larger for both boys and girls than is here represented. It is less of a conscious interest, and at the same time it is an interest in quantities of kinds, which is not very different from interest in quantities of objects. In the commercial motive boys out-run the girls, while the girls balance their lack in this line by a disinterested pleasure in the æsthetic and sentimental attractions of their collections.

Certain motives are more dominant at some ages than at others. Imitation is given as a motive by boys chiefly before adolescence, and by girls chiefly during adolescence where it takes on the character of faddism. Interest in quantity comes chiefly from ten to twelve years, before adolescence. Rivalry is scattered along, but does not appear before nine years, and is, perhaps, a trifle the strongest just before adolescence. The motive of enjoyment and use appears largely in the ten to twelve period. The scientific, the æsthetic and the commercial interests come principally in adolescence. The indefinite motives appear to a great extent before eight years.

Summarizing, we find childhood the period of blind yielding to instinct; the pre-adolescence years, from nine or ten to twelve, the age when imitation, competition, interest in quantity and enjoyment of the objects collected act as motives. In adolescence come faddism, and also the commercial, æsthetic, sentimental and scientific interests.

ARRANGEMENT OF COLLECTIONS.

A study of the arrangement or classification children make of the contents of their collections shows that they are in the stage of the naturalist rather than of the scientist. There is comparatively little classification of objects according to any scientific basis, that is, according to variety and kind. The large majority of the collections are simply "kept together," with more or less care. They may be in "no order," just "mixed together," "arranged any way," kept "in a pile," or, as may be stated more definitely, they may be kept in the barn or the shed, in a drawer, a box, bag, envelope, book, trunk, pocket, basket, bottle or can, on a shelf, or fastened on cloth, paper, ribbons, or on a string.

Boy, 8 years. I put my stamps and eggs in a box. I keep my arrow and spear heads in boxes. I keep my photographs in a drawer.

Boy, 9 years. I put my shells in a bag altogether. I put my stones in a box. I arrange them anyway.

Boy. I kept my butterflies pinned to the bottom of a box. I kept my birds' eggs all in the same box.

Boy, 11 years. I put my books in the closet. I put my pebbles altogether down stairs. I tied my cigarette cards in a bunch and put them in a box.

There are many evidences of care if not of arrangement.

Girl. I put my shells all in one box and I put the tender shells on the top so that they would not break.

Boy, 10 years. I had my birds' eggs in a cigar box. It is filled with sawdust. Sawdust is very soft and will not break the eggs. The eggs are very tender. I think that the humming birds' eggs are tenderest.

The first appearance of classification is on the basis of size or color or both. Butterflies may be arranged according to color, eggs according to size or color.

Boy, 9 years. I put the birds' eggs in a glass box, large eggs in the bottom and small ones on top.

Boy, 9 years. The cards I put in my scrap book, small ones on one page and large ones on another.

There is some classification of objects according to kinds, but this does not imply much knowledge of varieties.

Boy, 10 years. I arranged a box in ten parts and divided the eggs by the kind.

Boy, 11 years. I arranged my minerals in cigar boxes, and I made a lot of little paste board boxes, and put the minerals in the little boxes and put them in cigar boxes. The minerals are about all the same size and are numbered and named.

Boy, 11 years. I put leaves in a box and separate them by different kinds.

Boy, 12 years. I arrange my birds' eggs in numbers. I have a book and I put No. 1 on a bird egg. I put a 1 on the book and the name of the egg.

Boy, 13 years. When I got birds' eggs I went to work and got a paste board box about three inches deep, one foot wide, two feet long, to put them in. Then I got some long strips of paste board and fenced off one kind of eggs from another kind, then I put in these places cotton so the eggs won't break.

Girl. I arranged my cigar ribbons in a cigar box. I have every kind in a little pile by itself.

Girl. I have a cabinet for my curiosities, I arranged them by putting the same things alike.

Then there are miscellaneous methods of arrangement, for example, according to age, as magazines or theater programmes, according to beauty, difficulty of getting, value, rarity, shape, alphabetical arrangement, or some arbitrary arrangement, as in rows.

Girl. Pebbles and shells are arranged in bottles and trays in my cabinet in the best manner possible to show them off.

Boy, 11 years. I put them in books and put them fancy.

Girl, 13 years. My minerals I arrange in a cabinet in whatever way they look the best.

Boy. I took a book and numbered the pages like A, B, C, D, E, F, G, and then if I took a cigar wrapper that the name of it began with A, B, or M, or P, I would paste it on the right page.

Girl. I arrange my cigar wrappers in rows just as I get them.

Boy, 9 years. I put my cigar wrappers in an old composition book, and instead of putting them in rows, I would make a star.

Boy, 12 years. History scraps I put in books according to the way they fit in.

In some cases the objects of the collections are used for decorative purposes, perhaps hung on the wall or from the ceiling, as pictures, picture-cards, badges, feathers, nests, antlers, strings of eggs, buttons, etc.

Table X and Chart VII show the relative proportion of the various methods of arrangement.

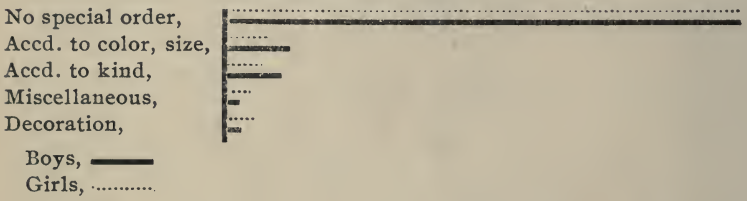
TABLE X.

Arrangement of Collections.

	BOYS' METHOD. PER CENT.	GIRLS' METHOD. PER CENT.
Things kept together. No special order,	80	80
Classification according to color, size, or both (size predominating),	9	6
Classification according to kind,	8	5
Miscellaneous arrangements,	1	4
Decoration,	2	5

CHART VII.

Arrangement of Collections.



There is very little spontaneous classification. This is natural as quantity is evidently more interesting than kind. Throughout all the ages the care of collections, the simply keeping them together, far outweighs any classification or arrangement of them. This is the only method up to nine years, when there is a small proportion of miscellaneous arrangements and of classifications according to color and size, with some few instances of classification according to kind. But these arrangements and classifications appear chiefly after eleven years of age. Decoration comes in chiefly from 14 years on. Boys shows more sense of classification than girls, and girls exceed in decorative and miscellaneous arrangements. Boys and girls show the same large proportion of "no order."

To summarize the facts which this study seems to indicate, we find:

1. The collecting impulse is practically universal among children.

2. It is an impulse of great strength, leading the child generally to make collections along several lines. It has its rise in early childhood, develops rapidly after six years, and is strongest from eight to eleven years, just before adolescence,

the greatest number of collections per child occurring at this time, after which it declines in intensity.

3. A remarkable variety is shown in the kinds of things children collect. What they collect seems to be largely the result of circumstance, environment, suggestion, or imitation, but *to collect something* seems to be the part of instinct.

4. Certain collections are very prominent and have a widespread following, showing the part imitation plays as incentive to the collecting instinct. The imitative influence is strongest in the pre-adolescent years, while in adolescence a specialized form of imitation appears in the way of faddism.

5. Certain inherent interests, however, are shown by groupings of the various collections. Of these the nature interest appears to be strongest. The next greatest number of collections is in the line of stamps, cigar-tags, etc., then come the trivial childish collections of sticks, glass, buttons, etc., and the collections ministering to the play interest, and then those pertaining to the æsthetic interest. Collections along literary, historical, sentimental, commercial, useful and "luck" lines are comparatively few.

6. The collecting impulse shows a certain trend of development in its character. In childhood there appears the crude instinct to collect anything, however trivial, anything simple and easy to obtain. In the pre-adolescent years the collecting interest reaches its height in genuineness. Interest in the things collected is here strongest. At this age nature and play collections are more prominent than at any other age. There is also greater susceptibility to the imitative influence at this age. In adolescence the instinct declines, and degenerates into a matter largely of fad and fashion, along sentimental and social lines.

7. In obtaining their collections, the young children are given their things largely; the children in the pre-adolescent period are most active in obtaining their specimens by their own exertions; in adolescence the commercial spirit, as shown in buying and trading, appears as an additional factor.

8. As to motives for collecting, the influence of others, shown in imitation and rivalry, appears strongest. Then comes the interest in quantity, in large numbers and great possession. The interest in kind and in the things themselves as specimens is small. Other motives also appear, such as the enjoyment and use of the objects collected, the pleasure in collecting as a pastime, the æsthetic and commercial attractions of the objects. A considerable proportion of vague reasons for collecting is given by the children.

9. In arrangement of their collections children show very little sense of classification. The large majority of children keep their objects in no order, simply keep them together. There are

some attempts at arrangement, as, for example, according to beauty, value, shape, and in arbitrary forms. The first classifications, appearing after nine or ten years of age, are on the sense basis of color or size, classification according to kind, what there is of it, coming a little later.

We have made no attempt to go into the psychology of the collecting instinct. In the mere calling of collecting an instinct, however, we have assumed considerable psychology, perhaps more than is warrantable. But certainly this phenomenon is no accidental affair, no merely acquired trait. When we consider its universality, its wide-spread affection, when we consider its intensity, the number of collections children make and the interest children take in them, when we consider the variety of the things collected, showing that the mania seizes upon any and practically every outlet imaginable, and showing, too, that to collect is more important than what is collected, when we consider, moreover, that the phenomenon has a definite progress,—a rise, a growth and a decline, an age-development,—we are inclined not to hesitate in calling it an instinct.

But, at any rate, whatever the psychological interpretation, the fact remains that the collecting instinct, passion or interest is wonderfully universal and wonderfully intense among children, and that consequently it may be used to practical pedagogical advantage.

Again the question may be raised, admitting that collecting is a genuine interest, is it an interest in the scientific sense? The scientific collection is made not for the purpose of obtaining quantity but for obtaining varieties in completeness, and for the purpose of classifying those varieties. But children care more for quantity than kind, they desire to possess things rather than to illustrate principles, and they show very little sense of classification. However, in scientific development, there seems to be room for a purely naturalist stage, preceding the analytical stage, a stage of going out and gathering in before sitting down to staid induction, a stage, too, of mere gathering before the stage of searching along the line of any hypothesis. Children seem to be in this more primitive naturalist stage, and as in such we must deal with them.

The age at which the collecting interest is of greatest pedagogical importance is largely in the pre-adolescent period, before which collecting is more or less a blind, groping, purposeless instinct, and after which it largely loses its purity by being bound up with other associations, but during which period it reaches its greatest intensity and genuineness. Here we find the greatest revelling in quantity, here the time when the instinct acts most easily through the incentive of wide imitation, here rivalry comes in to add zest, here the true naturalist spirit of finding and hunting, as opposed to receiving or buying, is most prominent, here the beginnings of a sense of classification develop. In fact, at this period the instinct seems to be at its height. Its tractability, too, through the incentive of imitation makes it most practical now for use in education. So much for the period when the collecting instinct is most important as an educative channel. What content interest of most value appears at this pre-adolescent time? Here we find the nature interest at its crest, and this is the time for sending children forth to gather in nature's stores, to let them roam and wander, to encourage their naturalist clubs where they may proudly exhibit their collections, where they may compare their treasures with those of the other children, where they may be stimulated to relate how and where they found their specimens and to tell all they know about them, not in any methodical way but in their own way where what they have imbibed naturally, or with unsuspected stimulus, may overflow in the telling.

As we have suggested before, the naturalist interest is a beginning interest, and the collection passion may be used normally as a beginning help in literary, historical and artistic studies in adolescence, in the same way that it may be used in nature lines in the pre-adolescent period.

FOUNDATIONS OF NATURE STUDY.

III.

By C. F. Hodge, Clark University.

"*Fit non Nascitur.*" This conclusion of Professor Huxley's may be taken to express the central thought of the present chapter. The entire quotation is as follows.

"Again I am incessantly told that we, who advocate the introduction of science in schools, make no allowance for the stupidity of the average boy or girl; but in my belief, that stupidity, in nine cases out of ten, '*fit non nascitur*,' and is developed by a long process of parental and pedagogic repression of the natural intellectual appetites, accompanied by a persistent attempt to create artificial ones for food which is not only tasteless, but essentially indigestible." (Science and Education Essays, p. 128.)

"Nine cases out of ten" may be rhetorical rather than arithmetical. It may be less than nine in ten or more than ninety-nine in one hundred, made stupid by failure to receive a natural education, in other words, an education adapted to their normal development.

In the first paper we considered the fundamental relations which the race has established with nature. These we found to be subjection and dominionization of animals and cultivation of the soil, steps logically consequent and fundamental to development of stable civilization. The second paper followed with, what has seemed to me, a basal rationale for the mental, moral and religious development of individual character. The essential here we found to be, in line with so many of the best tendencies in recent education, whole-souled activity directed toward ends that are solidly and intrinsically worth while, *i. e.*, active acquirement of right knowledge which may increase a man's ability to do human good. Reference to the child has been necessary to fill out the argument here and there, since he is at once the epitome of the race and father to the man. The topics thus briefly touched upon may now be considered in some detail under the general head of a child's normal relations with the nature about him. The question is, thus, what may a child to best advantage learn and do, and how he may best set about his task. This necessitates a discussion of different plans and methods of nature study now in the field in order to arrive at an intelligent opinion as to the method that may bring us the best results.

We are all under obligation to Mrs. Alice Freeman Palmer for exhorting us to give the children "large interests and give them young." This is in line with the intellectual and moral foundations treated in the last paper. These large interests must form the basis for healthful growth and furnish continual motive for the best activities of child life. We are also scarcely less in her debt for saying that: Although born much too soon to receive many of the advantages the present has to offer, still she is thankful that she was born soon enough to escape the flood of juvenile books that threaten to deluge our modern child. While, of course, we need all the help that books may be able wisely to give, to learn those things in nature that surround us on every side, and these are the things with which I think nature study should chiefly concern itself, out of books, instead of by first hand observation, is a palpable absurdity. The book method of nature study we would not even mention, were it not so ancient an inheritance from the schools of unnaturalism or antinaturalism of the past and so pressing an evil of the present. Despite all the struggles of so many of our best teachers, this abject bookishness enthralls the minds of our youth like the serpents of the Laocoon group. A high school teacher, when apple trees were blooming all about them, asked her class to write a description of an apple tree. The pupils immediately asked for references to books on the subject. She told them to refer to orchards, but the result proved that a number of the class copied their descriptions from encyclopedias. "*Fit non nascitur*," and the book toils reach down even to the lowest grades. In distributing some peach pits to a first grade the other day, I asked how many in the room already had a peach tree. One little boy's hand went up. I asked him how big his tree was, and he held his hands up about three inches apart to indicate its height. I next asked him where he got it? "My father gave it to me." Does it bear peaches? "Yes, it's covered with them." Are they good to eat? "No." Well, where is this wonderful peach tree, three inches tall, covered with peaches that are not good to eat? "*In a book.*"

There are two great sources of help and inspiration for nature study in books, the one on the side of literature the other on that of science. The deeper human values on the side of heart culture to be found in our nature literature, the wholesome optimism and the sane and sound philosophy of life, are things we cannot value too highly in nature study courses. But we must have the genuine art of the sincere lover of nature. By no amount of effort or dissimulation can mere compilers and book-makers supply or conceal this prime defect. We naturally turn to such English poets as Chaucer, Shakespeare, Wordsworth, Shelley, Keats, Burns and Tennyson for the great beginnings of the poetic interpretation of nature in English literature. Geniuses of this class thus lead and stimulate common minds to an appreciation of nature that they otherwise would never attain. As to our appreciation of bird life about us, how much do we not owe to the simple little couplet of Chaucer written more than five hundred years ago:

"And smale fowles maken melodie,
That slepen al the night with open yhe."

But much as we prize these older sources, our own American poets have carried this great natureward impulse to its highest perfection. Says Robinson (The Poet's Birds, London, 1883, p. 2), "This holds good of British poets, Tennyson excepted; for the poetry of America marks a perfectly new departure from the stereotyped, artificial and unsympathetic treatment of natural objects which characterizes British verse." And he finds its highest expression in Emerson, Longfellow, Lowell, Holmes, Bryant and Whittier, and, he might have added Whitman, Riley, Lanier, Emily Dickinson, Celia Thaxter, van Dyke and others. To these gifted spirits nature is a perennial fountain of strength, delight and youthfulness. And who does not enjoy life better when they find with Celia Thaxter "the key note of the universe" in the voice of the song sparrow. How much life such a tiny rill of nature's great stream may give.

"And slowly all my soul with comfort fills,
    And the old hope revives and courage grows;
Up the deserted shore a fresh tide thrills,
    And like a dream the dark mood melts and goes,
And with thy joy again will I rejoice:
God never meant to mock us with that voice."

Another side of our nature literature is represented by the works of Gilbert White, Thoreau, Burroughs, Bolles, Wilson Flagg, Bradford Torrey, Olive Thorne Miller, Jeffries, Hamilton, Gibson and others. Here we have the best nature lore that has ever been written in any language. Our children should revel in it and drink deep, and we rejoice in seeing these great original sources of nature inspiration utilized to the full.

This, however, is but one phase, and a somewhat passive, receptive phase of our nature study problem. It needs to be filled out at every point on the active side by science and productive art. The only point I wish to insist upon here, is, that we do not want any of the technical science of the college and university in elementary schools. For the universal elementary education it should consist, as Jackson puts it, of "learn well those things which no one is permitted to be ignorant of." This fundamental body of nature knowledge may be made a most important part of our elementary curriculum, but to do this we must needs winnow our natural sciences, especially our biology, clean of chaff, and introduce into this most critical part of our whole educational system, so far as the future of science in this country is concerned, the very wheat of human life. Let university, or even college science branch out into mental gymnastics and all manner of vagarious investigations, the wider the better; for we can never be certain of the human value of truth until it is discovered; but let the body of elementary science be all for sure human good. This point will receive further attention in connection with other methods of nature study.

So far as the book method is followed we should confine ourselves to the genuinely great in nature literature and to the science that lies closest to human life. All the twaddle, which, as Burroughs says, is not worth the paper it is printed on, should be relegated to the waste basket, if every publishing firm in Christendom fails.

We may next consider, what I may call, the logical method of nature study. This standpoint is best represented by the various works of Jackman, especially, perhaps, by his later books, Nature Study and Related Subjects, 1896, and Nature Study for Grammar Grades, 1899.

Taking the latter book for analysis we find that it begins with "Mutual Relations of Plants and Insects: Plants." The equipment of the class is "baskets and small knives." The first thing is a field lesson, the object of which seems to be to discover evidences of the work of insects upon plants in general. Particular plants seem to make little or no difference, although a few are mentioned, among the number, the oak, goldenrod, ironweed, willow, maple, poplar, dock, etc. We note two things thus at the very outset. First, the order by which the child and the race, and we may add every serious investigator, have approached this problem is exactly reversed. The interest of the child and the race certainly did not begin with any such abstractions but with particulars, each of which carried a definite reason as a motive to study. The question has always been, what does this particular insect do to this particular plant? And gradually, and we are as yet but a little way on this long road, we come out to general conceptions of the relations of all insects to all plants, with which Jackman would have us begin with a grammar grade class. Second, for over 4,000 years now we have known that certain plants have important relations to human life, and science has more recently demonstrated that certain insects are so destructive or beneficial that they ought to be known by every member of a civilized community. The great nature study lessons, deep in the experience of the race and the results of the best efforts of modern science, are thus alike brushed aside like cobwebs and in their place is substituted an abstraction of Jackmanian ingenuity. The second chapter takes up the animal side in the study of insects in general. There are some good hints about making insect nets and a breeding cage. Beyond this the chapter consists of minutiæ of insect anatomy and generalities such as coloration, methods of feeding, moving, laying eggs, etc. The next chapters in order deal with meteorology, astronomy, mineralogy, dissemination of seeds, forms of tree tops. And so it goes on balancing and systematizing every part and phase of the natural universe. Topics from the index may further show the wonderful completeness of the scheme. Adaptations of animal life, air pump, animal movements, astronomy for December, bones, buds, center of gravity, Chart IV, rainfall, colonies of plants, crystallization, dew-point, earth-worm, energy, equilibrium of bodies, eye, food-getting, forecasting the weather, fossils, friction, frog. We are amazed with the completeness and wonderful perfections of the plan, but must confess that it strikes one more like a dream of a paranoiac than a practicable method of elementary education. And in all this completeness, of the great human fundamentals, domestication of animals, cultivation of the soil, there is not even a trace. In the later editions we note the emendation of these features that we were wont to consider the best in the author's earlier books: the aquaria, which placed the child in relation with the fascinating world of life in the water (possibly because a vexatious form of aquarium consisting of glass and wood was adopted) and the garden work. This latter, as I learn from indirect testimony, is due possibly to the fact that the gardens "never amounted to anything;" and it is little wonder that after all the "co-ordinations" with number, geography, mensuration, drawing, expression, mineralogy, and soil analysis, meteorology, astronomy, botany, zoölogy, etc., etc., had been effected, little time, energy or interest was left for practical gardening.

Before summing up the educational values connected with the logical method, we should cite at least one other series of books of very different, and still in this matter of logical perfection, somewhat similar character. The books in this series are: Systematic Science Teaching and Advanced Elementary Science by Howe, published respectively in 1899 and 1900. Like the Jackman scheme, this embraces all creation, everything from the sun, moon and stars down to flies, morals and mosquitoes; but there is another marked feature of the books about which I almost hesitate to offer either criticism, or interpretation. If humorous, it makes them the funniest books, quantitatively, in the language. If serious, then they certainly are the most serious books on elementary science that we have.

Alice Freeman Palmer, in one of her lectures on nature study tells of a little boy who was asked on his return from school: "Well, Johnnie, have you learned lots of nice things to-day?" "No." "Why, how is that; you have been to school, haven't you?" "Yes, but all we learned to-day I have known since long before I was born." Step V in Systematic Science considers common animals and is to be taken near the end of the first grade, *i. e.*, with children about seven years old. The object of the first lessons is to learn the use of external organs from a boy;" and it proceeds as follows:

"*The Boy.* Children know more about their own organs than those of any other animal. Hence begin here and bring out the following points in preparation for following work.

"1. Where do boys live? 'On land.'

"2. Can a boy feel? Where best? (Make tests on exposed parts.)

"3. Can boys hear? What with? How many ears? Where are they placed?

"4. Can he see? What with? Where are the eyes placed? How many? What is the shape of the pupil? How is the eye closed? How many lids to each? Which way do the lids move? Any other use for the lids? (Protect and moisten.) How are the lids kept moist and from rubbing on the eyes?

"5. *Nose.* Where placed? Nostrils directed? Use of smelling?

"6. *Taste.* Where located? Why have we taste?

"7. What ways of moving has a boy? In what position does he 'creep?' How does he 'swim?' Position in 'walking?' How is the foot placed down in walking? How does running differ? How does he 'climb?'

"8. What limbs has a boy? How many legs? How many arms? How many toes? How many fingers? How many nails? Has he a thumb? What can he do with the thumb that he cannot do with any finger? (Place it opposite to fingers.)

"9. How are his legs and arms arranged? (In pairs.)" And so on for two pages more.

On reading this over, as well as a good deal like it, I felt as if suddenly smitten with softening of the brain. At a loss to see any joke in it or any sense, I read it over, quite seriously, to a friend in order to get his reaction. He is an intelligent man and much interested in our problems of elementary education. When I asked him what he made of it, he replied, with some diffidence, as if afraid that he might shock me and hurt my feelings: "Well, I don't pretend to know about it, but it's all mere twaddle to me." I also tried it on a healthy, active school boy, one who has done a good deal of nature study by way of managing aquaria, raising fishes, frogs and toads, running a successful garden, for fruit, flowers, vegetables and shrubbery, attracting birds to his home, keeping bees, etc., etc. He seemed to be able to see the fun of the thing and was convulsed with laughter. But when we came to "The Cow (No. 57):" "Notice that she has four legs and a cleft hoof with two toes," he burst out with: "I should think the man that set type would have known better than to have put that in."

I do not cite these things in any spirit of levity, for they are really too serious, as they seem to me to reveal one side of the fundamental difficulty we are now having with elementary science work. They, moreover, permeate, like a dry rot, our whole theory and system, since these leaders influence, and more or less dominate the teachers, especially the supervisors of nature study all over the country. This sort of "twaddle" thus often forms the greater part of outlines for nature work prepared by supervisors or superintendents for the guidance of their teachers. I have made quite a collection of these "outlines," and to make my meaning clear, take the following dose of bald abstractions, from one of the very best of them, intended for children of the first grade.

"General knowledge which these nature lessons should emphasize:

"Some objects are animal things.

"Some objects are plant things.

"Some objects are neither.

"Things occupy space.

"Things have weight: things have special weight.

"Things have temperature.

"Things have individual characteristics: they may be hard, soft, good to eat, liquid, solid, dry, wet, smooth, rough, heavy, light, etc."

All these things a child has known practically since he was a year old, "since long before he was born," and so thoroughly that talking about them can only befuddle the mind. *Fit non nascitur.*

To sum up, we might distinguish in this class of nature study two methods, the logical, represented somewhat more in its purity by Jackman, and the twaddle method; but since, when the rigors of adult logic are applied to an elementary presentation of a subject so infinitely complicated as the natural universe, the logic and the twaddle become tangled up beyond hope of separation, it might go by the name of the logico-twaddle method. Out of respect for my many friends who are trying to use it, however, I will continue to call it the logical method.

All such schemes of nature study cover the whole realm of nature just so beautifully thin, and everything is laid out in such orderly fashion that, I should think, nothing could be better calculated to give a child a notion that he knows everything worth knowing about nature. This I cannot but deem the gravest calamity, educationally, that can happen to a child. A similar calamity befalls a little cucumber, when it turns a rich autumnal yellow before the blossom opens.

Furthermore, this notion of omniscience is after all only a finely wrought up delusion. The child does not know the real universe, but simply somebody else's fine-spun dream of it. In my own experience with this sort of instruction, I have become convinced that the child does not even know what he is talking about much of the time. Now the Creator is ONE, eternally the same and infinite. Men are many, mortal and finite. If any one man comes to really know an infinitesimally small part of the universe, it will suggest enough for him to busy himself about and give him plenty to tell other people about for his little threescore years and ten. For example, Walt Whitman's way of studying the stars, on his back in the grass, after a hard day's work, is good enough for me, at present. And if, when I am called hence, it be to some other star or planet, I hope I may still be content to think that the problems set me to solve, or try at, are those that lie closest to the life about me. Of course, I do not mean to cast any reflections on the science of astronomy. But it is only a few that need know much about such things. I enjoy nothing better than talking over the possibilities of Mars with Dr. Story, while I am resting, and I am heartily glad somebody knows all about astronomy. Possibly, if we are ever able to take the wings of the morning and fly with the speed of thought from star to star, I may take a practical course in astronomy myself. There is plenty of time for that. But really, if everybody knew everything, as these plans of nature study would have it, nobody would have anything to tell anybody else, and the world would be in a condition of stagnation a thousand fold deader than if nobody knew anything.

But this is only a bit of diversion in preparation for the next point, which is that there is a real danger in presenting this vast scheme of the universe to a child, however easy and simple the steps may be made. Dr. Ludwig once said in effect that he thought that the highly abstract sciences were only fit subjects for the highest and bravest souls, and that, in his long and rich experience, he had noted that in less favored cases there was a fatal tendency to mental unbalance. And even the best of men if he be doomed to be continually thinking of whizzing through space at the rate of a thousand miles a minute, or of the infinite in time, space, or process of any sort, must hold tight to his boot-straps and keep his weather eye out for any bulge in the top of his head. He will do well to cultivate some very mundane hobby, hunting and fishing, cabinet work, or, best of all, perhaps, horticulture and the raising of "garden sass," to keep himself within sight of Old Mother Earth. It would thus seem sheer foolhardiness to launch at best "unbalanced wits" of six or seven, wholesale, upon such unfathomable and tempestuous depths.

This brings us to the final points as to the logical method, *i. e.*, its influence upon teachers and especially children. Teachers have a nerve-wearing enough time of it, and I often wonder how they bear up as well as they do. Between the care of their forty-eight pupils and the wear of merciless supervision, the only wonder is that they all do not go into nervous prostration. I certainly am not conscienceless enough to wish to make life any more of a burden to them in the matter of learning everything there is to know about creation. The Almighty, and possibly we should add Jackman, alone can know it all, and He will reveal it to us according to our strength and in his own good time and way. To put it so that they never can forget it, I often tell teachers that I do not care, so far as my own plan of nature study goes, whether they know beans from hen's eggs, and I do not, if they only enjoy saying, "I don't know, but if you can, find out and tell us." And I tremble for teachers' nerves and for nature study, when I hear of six weeks summer schools of cram. There is a kind of knowledge of nature that lies so close to everyday life that instead of tending toward nervous prostration, it makes life easier, cheerier, buoys it up and makes it more and more worth living. Just this kind of knowledge, in whatever direction a teacher may elect to turn, and the more divergent the choices the better, is all I ask. The practical question is, thus, what can the ordinary teacher do with the logical method. I am apt to ask this question of anybody who may come along. As a single example take the answer of an intelligent supervisor of nature study from the West. What can teachers do with ——'s method? "Nothing whatever. We have had so and so at our teachers' institutes but the teachers did not get a particle of help."

The crucial and final question, however, is what kind of children does it make? Are they led to developing definite lines of interest and work and to carrying them along to some fruitful result? A teacher of first rate medical education, and a close observer on just this point, gave me the following answer without the least hesitation. "What the children do does not amount to anything. It is good neither as work or play; and as to the kind of children it makes, they are not children at all. They are *freaks*." I do not need to dwell longer on a method of nature study that rubs off one particle of bloom from the freshness and beauty of childhood.

A method not so comprehensive and pretentious may be designated as the "scientific" method of nature study. The best expression of it is to be found in the "Guides for Science Teaching," published by the Boston Society of Natural History. Each "Guide," there are now fifteen in the series, takes up some common group of things in the environment of the child and treats it "*scientifically.*" No. I is "About Pebbles," and three of the others are on minerals and rocks, the rest are chiefly systematic and structural zoölogy, with no hint of domestication of animals, and one is "Concerning a Few Common Plants," with no hint that a child might rear one himself. No. XIV, "Hints for Teachers on Physiology," is not included in this discussion, since it belongs to a somewhat distinct field. Possibly on account of the first number, this whole series, especially when I see it being applied in the schoolroom, puts me in mind of feeding a child gravel with a spoon. Take a single example.

The honey bee should have a place in every nature study course. Nothing can be more absorbingly fascinating to children and teachers alike than the busy life of the hive, and its work among the flowers is no less interesting. Honey is an ancient, even proverbial, human good, that children can readily appreciate, and the important function of bees in cross pollination makes one who keeps a swarm of bees a public benefactor in a neighborhood where they have gardens and fruit trees. The "Guide" devotes eight pages and a plate under "Order XV, HYMENOPTERA," to the "honey-bee, *Apis mellifica.*" The plate gives external anatomy, all dissected in orderly fashion, and the greater part of the text is taken up with descriptions of structural and physiological minutiæ. The work of bees in cross pollination is mentioned in an indefinite, abstract way, and the word "honey" (apart from honey-bee) occurs once in the following sentence: "The workers build and repair the comb, collect the honey and pollen, and take care of the young." This simply shows how desiccated and apart from all notions of human good some of our leaders consider that even elementary science should be made.

I happened, by mere chance, to see this lesson as it appeared in a fourth grade class of a "model" school connected with one of the Massachusetts State Normals.

There was not a bee, ant, or wasp, dead or alive, not a bit of comb or nest of any sort, nor a particle of honey; in fact, not a specimen of any kind. On the board was a sketch of a bee and over it the word "Hy-men-op-te-ra." Part of the lesson ran about as follows. Questions by teacher and answers by the pupils will be readily distinguished.

"Into how many parts is the body of a hymenopterous insect divided?" "Three parts." "What are they called?" "Head, thorax, and abdomen." "Of what parts does the head consist?" "Eyes, antennæ, jaws and tongue." "Into how many parts is the thorax divided?" "Three parts." "Who knows into how many parts the thorax of this bee (pointing to the sketch on the board) is divided?" Hands again went up and one of the children again answered: "Three parts." "Will you count them, please?" The child counted slowly "One, two, three." (Teacher) "One, two, three, and:—what is this other part?" (boy slowly) "F-o-u-r." "Yes, that's right; four parts. The thorax of a hymenopterous insect is divided into *four* parts. That is why we class them as hymenoptera. Always remember, children, that the thorax of a hymenopterous insect is divided into *four* parts. Don't forget that again; for that is the most important fact for you to remember about the hymenoptera."

And so it went on for the whole period. Any one, but the teacher, could see that the class were in the condition of a pulp. The flowers were blooming and the bees were humming just outside this ghastly pedagogical charnel house, but not a breath of all this wondrous life was permitted to enter. "*Fit non nascitur;*" and a few such "lessons" would certainly do enough "fitting" for eternal stupidity.

The thoughtful reader will recognize that "scientific" is really a gross misnomer for this method. I have consequently kept the word closely guarded by quotation marks to indicate that some people call such things "scientific." Huxley defines science as "organized common sense." The two things must go together, organization and common sense, and I submit that no amount of organization of nonsense can make science.

Quite a different point of view is represented by what we may call the æsthetic method of nature study. This method would take nature just as we find it and be content to see and enjoy the beauty of it. It would bring into the course wild-flowers, grasses, trees, butterflies and, possibly, a dash of bird song. All these things are excellent and it is only when they tend to exclude other excellent things that the æsthetic method is in danger of inverting the proper relations of things. Huxley has well stated the case as follows:

"In these times the educational tree seems to me to have its roots in the air, its leaves and flowers in the ground; and, I confess, I should very much like to turn it upside down, so that its roots might be solidly embedded among the facts of nature, and draw thence a sound nutriment for the foliage and fruit of literature and art. No educational system can have any claim to permanence, unless it recognizes the truth that education has two great ends to which everything else must be subordinated. The one of these is to increase knowledge; the other is to develop the love of right and the hatred of wrong."

"With wisdom and uprightness a nation can make its way worthily, and beauty will follow in the footsteps of the two, even if she be not specially invited; while there is perhaps in the whole world no sight more saddening and revolting than is offered by men sunk in ignorance of everything but what other men have written; seemingly devoid of moral belief or guidance; but with their sense of beauty so keen, and the power of expression so cultivated, that their sensual caterwauling may be almost mistaken for the music of the spheres."

The beauties of nature are made to be enjoyed in peace, and for purposes of nature study I would have our homes and schoolhouses surrounded by them and full of them, but caterwauling about them is no high activity of the soul and is apt to detract from best enjoyment. A further danger connected with the æsthetic method is that it is apt to fall to the level of fancy work, in which children, many of the boys at any rate, are as unable to participate in any whole-souled way as they would be in tatting and crocheting.

Still another form is the museum method of nature study. There is an instinct of no very high order, sometimes called the magpie instinct or the museum instinct. Magpies, crows and jays have it, children are quite apt to develop it, and even some adult men become permanently afflicted with it, and I believe certain monkeys reveal traces of it. I do not know that it can properly be called an instinct, since so few animals show it, and in these it seems to possess no fundamental associations with the serious methods and problems of their lives. At any rate, it may develop as a passion of some sort for heaping together all sorts of things to look at. In proportion as a person becomes interested in the movement and life about him, the museum passion is likely to wane, for no museum specimen can actively do anything in the world; it can only gather dust and moulder and fade, and when one begins to take an active interest in the active side of nature and comes to realize the importance of the common processes going on about him, his eyes are opened and he finds himself living in the midst of an infinitely more wonderful museum than ever systematist dreamed of.

I do not mean to insinuate that for scientific purposes museums are not legitimate enough, but for show purposes they are failures, and in elementary education there is something infinitely better than museums and the cultivation of museum instincts, for this latter may mean that a person gets hypnotized for life with the idea that there is nothing to look at except in museums.

Of course the museum method of nature study is inextricably tangled up with the logical and scientific methods, and in the school from which I cited the lesson on the hymenoptera it was in evidence on every side. I remember distinctly of noticing a whole flock of stuffed hermit thrushes.

Shortly after my visit to this school, I went to see another, also a Massachusetts model and normal school, and amid all this fault-finding and complaint, as some may be inclined to interpret it, it gives me the most genuine pleasure to describe what I saw. There was little or none of the museum method to be seen. A class started for the woods with its teacher to study birds. On the way we stopped a moment to notice a freshly built oriole's nest. A little further along was a large tree in which the tree swallows were nesting. Down the hill a little way into the woods a branch was gently drawn aside and the whole class was permitted to see a black and white warbler on her nest. There were over twenty in the class, but so quiet was every movement that the little mistress looked up into our faces apparently not the least disturbed and did not leave her nest. In an open glade, well chosen, near a large meadow and marsh on one side and with the deep forest on the other, the class was given a signal and all sat down on the grass and preserved silence. A flicker tuned up back in the woods and a nod from teacher to pupil and back again indicated that it was recognized. Robins, blackbirds, peewes, orioles, grossbeaks, a wood thrush, various warblers and others were listened to and examination passed upon their various notes, all within the most ideal half hour of living nature study I ever experienced. We then went on to a bobolink meadow and down into some deep woods again to an ovenbird's nest.

We returned to the school of brick walls in time for a large class also in the study of birds. Here the entire recitation consisted in questions and answers upon what each pupil had learned solely from the living birds that he had been able to hear, see or watch in their nest building. I never in my life heard a more animated and interesting recitation. The secret of it was that each one had perfectly new, fresh and original information to impart, not dead stuff which all had alike tried to resurrect from a book, but truly "worthy and delightful knowledge" which its possessor was happy to impart and which teacher and all the pupils were interested to learn.

In the primary room of the same model school I saw something else that caused me to thank God and take courage. It was a seedling *oak* about four inches tall, growing in a pot in the window, of *s–o–i–l*, not sawdust or sand, and it had not been dug up to draw, but lived as the hope and delight of a merry room full of children who were planning soon to plant it carefully outside and raise an oak tree. The teacher was a young

English girl, and it is the only case of an oak tree really growing in a schoolroom and in the hearts of the children that I have ever seen. But in it is the germinal hope of American reforestation. (To save possible correspondence I will take the liberty to state that this refers to the Fitchburg Normal School, Fitchburg, Mass.)

With any who do not think with me that this is better than wasting time with museum specimens further evidence is useless. Of course, for the museum method to be developed in a few large centers, where living and active methods of study are impossible, it is quite another matter. But for every town and country district to gather a school museum, as is sometimes urged, means an infinite waste of valuable life and worse than waste of time. However, the method may be indefinitely indulged, as a safety valve, if such be needed, and really, too, with very good advantage, in the matter of insect collections. By having the pupils mount them in convenient little hand cases, as the Gypsy Moth Commission has arranged its collections, to show the egg, egg cluster, larvæ of different sizes, pupæ, moulted skins, and male and female adult insects, together with eaten leaves, stings and gall of their food plants, the series can be made to tell the story of an insect's life and wonderful transformations in a way that it would be difficult to find at any one time in living nature. If the insects be those that every member of the community ought to know in order to avoid loss to himself or injury to his neighbor, *i. e.*, "to develop the love of the right and the hatred of the wrong," such collections, even if not so complete, become most useful instruments of instruction in a field where it is difficult to impart clear ideas without them.

There are a good many more methods of nature study that space permits me to mention scarcely more than by name. For primary grades Dr. Wilson's mytho-poetic method is admissible, though scarcely complete. Then there is the sugar-coated-pill method by which the attempt is made to stuff in a modicum of "scientific" information under cover of what some may be inclined to call "poetry." So collections are made which must contain a "poem" about every flower or animal, or other phenomenon of nature, even though, as a friend once remarked to me, they have to saw it out with a bucksaw. A "poem" entitled "The Body," taken from "Nature in Verse" begins thus:

"From the top of my head to my tiny toes,
I am built of bones as every one knows."

Any one with sufficient perseverance can supply the remaining twelve couplets, if they care to. Or take a dose from one entitled: "The Setting Sun."

"Dear John, the sun is setting now:
Behold him in the West;
And all the children now must soon
Lie down and go to rest.

. . . .

"But when the sun comes round again,
And rises in our East,
Then evening will begin with them,
And they to bed will haste."

Or take a sample from a "poem" entitled: "The Raccoon."

"Come, child, and see our pet raccoon,—
The raccoons live in the woods, you know,
But ours was caught and caged and brought
From old Virginia, long ago.

. . . .

"His fur, you see, is yellowish gray,—
And he is nearly two feet long;
He lives on roots, and nuts and fruits,
When he's his native woods among."

"*Fit non nascitur.*" It is little wonder I hear children in school exclaim, "I hate poetry."

We hear a good deal about the excursion method, and under certain circumstances it may be used to advantage, but it is likely to be the case that the best things in nature can be better studied either alone or in groups of two or three. Most of the actual nature study must be thus individual, as represented in the second lesson in the Fitchburg school described above: while excursions may be utilized for general demonstrations and practical examinations.

A final method of nature study, which on account of its prominence just now we ought not to pass by, we may call the knot-hole method. It has been developed by the genial Professor Bailey of Cornell. It consists typically of picking up on the street, or anywhere else, a sliver of pine, a straw, a broom-splint, any bit of garbage, or if nothing of that sort is at hand, a knot-hole does very well. One can usually find a knot-hole about the wood work of the schoolroom, and around it the genial professor can spin a most wonderful web of the finest yarn. By this method, the teacher need never be at loss for "nature study material," and one thing is as good, or as good for nothing, as another. He may thus begin with a knot-hole, or anything else, and as by magic, evolve a pine tree and its mode of growth, a pine forest, methods of forestry culture, lumbering, saw-milling and no end of other things. This method may be made very bright, witty, even funny by the sportive gambols of the imagination. It might serve a useful purpose to amuse a tired school for an hour on a sultry day; but I fail to see wherein any appreciable "increase of knowledge" is attained or how it can serve to "develop love of right and the hatred of the wrong."

This is a most vital matter for nature study for the whole country, because New York State has taken the lead in making liberal appropriations of money to promote this particular study, and this has been done largely with the laudable purpose of stemming the cityward tide that is depopulating rural districts by giving sufficient knowledge of the forces and possibilities of nature to enable people to maintain happy homes in the country and gain a livelihood by a more perfect utilization of natural resources. Many other States are looking on to see how it "pays," and what the output is. A series of nature study leaflets has been issued and they have spread like wildfire over the State and the whole country. Over 20,000 teachers in New York State alone have applied for them up to last accounts, and the tendency has naturally been to interpret this lively demand as indicating the success of the undertaking. This is quite premature; for the great demand for the leaflets indicates only a great need of something sensible in the way of nature study. The matured judgment of this great body of teachers has not been handed down. As leaflet after leaflet has come, I have not been able to down the conviction that this most splendid opportunity for nature study ever offered in the history of our system of education was being seriously trifled with. I am very much afraid that this genial knot-hole business will not carry up indefinitely. A squash seed knows all about how to germinate, and, while it may form a valuable lesson for college botany, the only fundamental reason for planting a squash seed is to raise the finest squashes possible. As a farmer boy, I know from happy experience the educational value of a bit of garden and a piece of land that I could call my own farm, but I fail to see where "egg-shell farming" is calculated to strengthen either the moral, mental or physical powers of a child. Common oaks are treated according to their botanical classification, but with no hint of planting an acorn. The common toad forms the subject of a larger leaflet, and what the children, as it would seem, ought to be encouraged to observe in the pools about their homes for themselves, is told in detail, both by text and elaborate picture, so that they may learn it all from a book, and there is no hint of a child's actually rearing them to utilize as a force in nature. According to Kirkland's estimate of $19.88 as the possible annual value of a single toad's work to the community in destruction of cutworms, any child might rear $10,000 worth of them every season at practically no expense, until ground feeding insects and many others became curiosities in his section, and he would be much the wiser and the better for the work.

Some years ago Rochester was devastated by armies of caterpillars of the white-marked-tussock moth. The way the school children cleaned them up by collecting the egg clusters forms one of the most interesting nature study lessons on record. The Bureau of Nature Study at Cornell begs for criticism and suggestion, and hoping that this might be made an inspiration for the clearer understanding of the insect pest problem in every town and district in the land, I wrote a suggestion that the story be made a nature study leaflet. That was three years ago.

About the same time Slingerland brought out a remarkably fine study on the Codling moth (and he has just recently followed it with one on the peach borer), giving its whole life history and all the most approved methods of combatting this worst enemy of our apple crop. In my humble plan of nature study, I would have a child, wherever possible, actually rear an apple and peach tree of his very own and in the best manner known to modern horticultural science. I actually knew of a boy who became interested in the Codling moth from Slingerland's bulletin, saving $150 worth of apples in one season from the trees on his city lot. If the children are to succeed with their trees, they must know about these insects, and I "suggested" a leaflet again. The estimated annual loss to New York State alone from this one insect is $3,500,000. With the problem clearly before them I dare say the children of the State might have raised woodpeckers, bats and nuthatches enough to have gone a long ways toward clearing the State of Codling moths by this time. They would have been greatly developed, in my estimation, both in knowledge and in virtue, and would have enjoyed the work exceedingly.

Professor Bailey is an authority on horticulture and he has written a book entitled "Lessons With Plants." It purports to be elementary and intended for beginners. I submit that nine-tenths of the text is college botany, details of buds, stems, leaves, roots, etc. An elementary botany, embodying the knowledge of the culture of plants such as that acquired by the race thousands of years before formal botany was dreamed of, arranged solely according to the human value of the plants to be cultivated, which, in fact, laid all the foundations of worthwhileness for the evolution of modern botany; such an elementary botany has never been written, but is sorely needed. Instead of coming out with this fundamental, perennially worthy and delightful knowledge which would aid a child to make his home a paradise of living plants, the book ends with "classification of Species," "Linnæus," "Asa Gray," the botanical press and the old tin coffin for flowers.

In working through all the methods of nature study I have been able to find, I have been impressed at so many points by their passive, receptive character, their flabbiness that I have been led to develop what I call the active method. Even a dog cannot be happy and develop any character worthy of the name without something that appeals to him as worth his while to do. Without this, life becomes a burden and even a dog, a pessimist. In line with the foundation principles laid down in the previous chapters the active method of nature study is that which attempts to present to the child those things in the nature about him, which, step by step and from his own point of view are the best things, *i. e.*, the fullest of real human good, of anything he is able to learn and especially to do. Bailey's epigrammatic definition of nature study: "seeing the things which one looks at and the drawing of proper conclusions from what one sees"—which has quite taken the country by storm—contains the very heart and essence of this flabbiness and passivity against which I am contending. Is the nature study of the race for tens and possibly hundreds of thousands of years to go for nothing? Does this long, infinite series of experiments, coupled with the contributions of all modern science avail nothing by way of telling us what things are worth while looking at? Must we stop to look at every straw, bit of garbage and knot hole in our way? And when we have drawn the "proper conclusions," what then? Here is where the real struggle begins. Where is the indomitable human will that has been evolved from eons of active struggle and work *worthwhile?* Is that all to rot and deliquesee in "proper conclusions" about knot-holes?

The child is born freighted with this priceless treasure of the ages, tempestuous will, incessant activity, passionate interest in everything. It will come soon enough at the best we can do; but why deliberately sickly him o'er with the pale cast of adult "proper conclusions," so soon?

"Not in entire forgetfulness,
And not in utter nakedness,
But trailing clouds of glory do we come
From God, who is our home."

Modern evolution gives these words an infinitely deeper meaning than even Wordsworth could have known. Long before birth impulses to move the limbs develop and in early infancy the nervous mechanisms are perfected so that not only is efficient utilization possible but a large number of their movements are relegated to the spinal cord in order to leave the brain free to attend to more important matters. The number of arms and legs best calculated to render the vertebrate organism most efficient was all counted out and determined upon by the devonian fishes. The action of the eyelids and tear glands has been turned over to the efficient management of reflex action from the frogs up. Why revert to invertebrates and be raking up all these old scores? Why laboriously haul them up into consciousness, when we are all equipped for vertebrate action and there is plenty else to do?

How many children ever grow into the fullest realization of every good possibility of their infancy? Why must "shades of the prison house begin to close upon the growing boy?" However rare it may be, still it is true that we do sometimes see the charm of childlikeness continued even to the end of old age, the open-eyed interest, the eager, happy activity, the rapid growth.

"Thou best philosopher, who yet doth keep
Thy heritage, thou eye among the blind.

. . . .

"Thou little child, yet glorious in the might
Of heaven-born freedom on thy being's height."

If we can find a nature study vital enough, we may have more Wordsworth's in the world; but it must be full of

"Delight and liberty, the simple creed
Of childhood, whether busy or at rest.
Of singing birds and gladness of the way,
Of splendor in the grass, and glory in the flower."

Providentially shielded from language until about three, the child learns nature by the active method and progresses with, some bumps to be sure, but with infinite delight and wonderful rapidity. I can find no reason either in the nature and philosophy of things or in the exigencies of our school system for breaking off this splendid growth process so abruptly at the beginning of school life. And can it be said that our schools are free from all semblance of "shades of the prison house?" Is there any truth in the beautiful words of Jackman on this point? "He (the child) comes to the teacher with his eyes filled with a thousand pictures, but these are ignored, and he is robbed of them one by one, until the beauty of this world fades from his sight, and it is changed to a vale of tears." I think there is, and Huxley certainly agrees. Can we not educate and agitate against repression and substitution of the child's natural intellectual appetites that is making nine children out of ten stupid and commonplace?

I know we are living in an age of neo-fatalism caused by wall-eyed blindness to the most momentous fact that modern neurology has contributed to pedagogy, the wonderful plasticity of the growing brain, and to a totally inadequate conception of the doctrine of heredity. And so we have as a proverb, time honored, I know, "Poets are born not made," but I repudiate and anathematize it. And so we have genius of all sorts "born not made." And even Celia Thaxter must go out of her way to insist that love of flowers is "born not made." (Island Garden, p. 5.) And so it is with everything, mechanical skill and business ability, tendency to commit crime, addiction to alcohol; wherever I turn, I find philosophies of life ghastly with this fatalistic decay. Lack of space precludes more extended argument. Suffice it to say that things commonly ascribed to heredity may perfectly well have been learned; and, on the side of brain plasticity, two brains may be alike cell for cell and fiber for fiber and yet the cells *act* quite differently. But we are slow to appreciate the educational bearing of the fact that the brain is wonderfully precocious in its development. It almost reaches its adult size at three and may do so quite by seven or eight. An elaborate study has recently appeared in the Journal of Education, comparing the Jukes and Edwards families. Of course there are all degrees of variation in certain matters of physical organization which may influence the dominance of the brain over the whole, but, I take it, that any one who is a fitting teacher of the young will agree with me when I say: transfer babies on the day of birth, and a Jukes baby might have grown to be an Edwards, or *vice versa*.

Nothing is being more fully recognized at present than the passion of children to imitate, and their wonderful plasticity in this respect. Hence, it does not at all follow, that a plan of school work is good, because the children take to it readily and become as enthusiastic as their teacher may be about it. We need deeper criteria of educational value than this, and we have already discussed these criteria in the foregoing chapters. It remains only to add that this very plasticity of the youthful mind should make us all the more careful to apply these fundamental, *human*, criteria to every part of a nature study course. If we do not do this, we run the risk of encountering two terrific dangers as to the child's future, and these are not on either side, like Scylla and Charybdis: for we have no business to steer anywhere near either of them.

One danger is that by substituting superficial and technical for the deeper human relations a child's normal relation towards nature may be ruined for life. As John Fiske has so luminously shown, human infancy is a prolonged period of plasticity for education that must support the strain of after life. If the time is wasted on trivialities, there will be no foundations laid. To change the figure, if the exuberant growth of youth is turned aside, when school is over and the stimulus to imitation ceases, all acquisitions not related to after life are apt to die back to the root, and the vigor of youth being spent, no symetrical growth is possible, and the dead stubs remain only as encumbrances, apt to rot down and hollow out the whole trunk. But both these figures fail to adequately express my thought. Wordsworth can help us out again, if we are able to realize vividly that it is not thanks to any superficial knowledge as to calyx, corolla, stamens, pistils, etc., but:—

> "Thanks to the human heart by which we live,
> Thanks to its tenderness, its joys and fears,
> To me the meanest flower that blows can give
> Thoughts that do often lie too deep for tears."

The second danger is pessimism. In my laboratory experience I have made innumerable series of embryological sections, until studying developmental phases has become a habit of mind. Whenever a pessimist turns up I section him mentally and morally, about as follows: As a boy he was set to learning something. He learned it with diligence and fidelity. After he had learned it, he found that it was "*no good.*" He was next set to learn something else and found that that also was "*no use.*" So years are spent, and, "mocked and deluded all this while with ragged Notions and Babblements, while he expected worthy and delightful Knowledge," he develops, as any embryo similarly treated would, into something moribund, more dead than alive,—a pessimist.

In treating of the foundations of nature study it is no part of my task to develop the superstructure, which, of course, relates to the subject matter, arrangement, and details of the course. In discussing the different methods I have endeavored to grapple with the fundamental theories underlying their conception. Loving those best whose points of view differ most from my own, I have been obliged to speak the truth as I see it myself.

The theory underlying the active method is simply that for public, common-school nature study the whole course should group itself about the main axis of fundamental human goods, religious, ethical, educational, æsthetic, economical, all combined. A child is thus given something to learn and to do. He does it and is surprised at the amount of good he finds he has done. As this goes on from day to day and year to year he feels the sources of power to do good growing strong within him. While differing in many essential respects, Lange in his Nature Study, and especially in his book on Our Native Birds, approaches this standpoint rather more closely than any other writer.

I have been obliged to leave much to be read between the lines; but in the light of all that has been said the whole subject may be summed up in my own definition of nature study, which is: *learning those things best worth knowing, and doing those things that make life most worth living.*

THE RECONSTRUCTION OF THE KINDERGARTEN.

By FREDERICK EBY, Fellow in Psychology, Clark University.

The kindergarten is the most unique factor in the complex machinery of modern education. It was the product of one master mind, and for more than half a century it has retained, comparatively unaltered, the form originally received. In this respect it is in the sharpest contrast to elementary and also secondary education. Their methods and principles have never found classical expression in any unitary system acceptable to the majority of thinking men. The strife of the multitude of conflicting views and opinions has been long and discouraging, and even yet there is no sign that this sad educational confusion is, in the words of Spencer, about to pass from "the disagreement of the enquiring to the unanimity of the wise."

Hitherto the kindergarten has been largely free from this inner struggle and confusion incident to the birth and growth of the other schools. The advocates of this most successful movement for infant training have faithfully guarded and practiced the teachings and methods of their inspiring leader, Friedrich Froebel. This conservative attitude has been, in no degree, a hinderance, but rather an incentive to the remarkable rapidity and continued triumph of the kindergarten throughout the entire civilized world. As in every new movement, this conservative spirit has been most beneficial in sustaining the enthusiasm and uniting the efforts of its advocates, until the kindergarten is impregnably established in our modern society.

Whatever personal prejudice may still linger among certain educators and laymen, it is now indisputable that the kindergarten fills an essential want, and must, therefore, be regarded as an organic part of the totality of developmental forces, along with the home, the play-ground, the elementary school, and the Sunday school. Accepting this as a fact that need not be proved in the province of this paper, it is possible to define, in a measure, the problem which lies before us.

It has just been pointed out that unlike education in general the kindergarten began with a body of principles, methods, materials, and organization fully developed and accepted as such by all its advocates. In this respect it has been far beyond its age, so that until recent years no one who has sympathized with the movement, recognized its importance, and understood its principles and methods, has dared to suggest that the kindergarten may have grave defects which are very injurious to the children entrusted to it. However, coincident with the rise of child psychology, or better, genetic psychology, and the later investigations into the hygiene of the physical development of children, many serious questionings have arisen among practical kindergartners themselves. The outcome of this awakened interest in infant development from the biological and genetic sides is the separation of the kindergartners into two camps, representing respectfully conservative and reform ideals. The party making for progress exhibits an increasing eagerness to break away from what they regard as a narrow Froebelianism; they believe in introducing new methods, new plays and games, and insist on reconstructing the kindergarten in harmony with child study and the nursery. Their opponents with equal zeal insist that Froebel must be read more closely and followed more intelligently; he may have made a few errors in details but the fundamental and essential principles he has stated, are beyond discussion; investigation has in no way disproved Froebel's authority, but elucidated, enlarged, and confirmed it. New methods may be good in some few instances, but they must not interfere with the tried and proved plays and gifts of father Froebel.

With neither of these two parties do we engage. Our task is merely to make a critical examination of these divergent points of dispute to determine, in a measure at least, wherein the path of greatest progress may lie for this great educational organ, which has made even its enemies its admiring devotees.

For convenience of discussion the problems that grow out of the debate may be summarized under three heads:

1. Discussion of the philosophical and pedagogical principles underlying the kindergarten;
2. Questions of technique and practice; and finally,
3. The hygiene of the kindergarten.

Under the first head may be grouped (a) the conflict over the application and the worth of the "law of the connection of contrasts," and the consequent discussion of the value of the gifts and occupations as a closed system of play-materials. (b) Here, too, will come a thorough clearing up of the sad confusion that has rested so long upon the question of kindergarten symbolism; and with this the tendency to sentimentality, which has been so obnoxious to many critics. (c) Finally, it is to the best interests of all to examine *de novo* Froebel's teachings in order to learn where his chief emphasis was placed, and in what regard his principles must be modified to suit the varying conditions of our American children.

The questions of technique refer mainly to the discussion of the nature and suitability of the materials to be used in plays, games, songs, stories, etc. It will also include the consideration of programmes for season and week, time-tables, discipline, and the value of the circle and other practices.

One of the most important chapters of the kindergarten education has been too sadly overlooked. It is time the few facts that have been gathered on the hygiene of the kindergarten be collected and discussed. (a) This will embrace a study of the sanitary conditions of the buildings, heating, lighting, ventilation, etc., also personal hygiene of the individual children within and without the kindergarten building. (b) Still more important will be the questions of habit or automatisms from incessant clapping, hopping, and such similar movements too frequently repeated, and the danger of too much specialized physical activity of certain muscular and nerve groups, and too slight use of others. (c) Finally, there must be some study of nervousness arising from social excitement, overstimulation, too minute work, fatigue, strained attention, prolonged hours and similar causes.

It remains to mark some delimitations of the subject. The problem of the relation of the kindergarten to the home, which will always remain of the most vital importance, can be touched only in a cursory and incidental manner. The relation to the school must also be side-tracked in the present discussion. For many years this relation to the school has received undue prominence. There has been a tendency on the part of some, to think that the kindergarten should submit to the restricting domination from above, which has worked so much mischief in primary and secondary education. Froebel never intended the kindergarten to be a preparatory school for the elementary grades. He is very emphatic on this point. When he founded the kindergarten he expressly stated that it must not be a school in the same sense as the higher schools. Yet at the same time he is very clear in maintaining that a close connection does exist; but to discuss what this relation ought to be would demand the consideration and entire reconstruction of pre-adolescent education.

GIFTS AND OCCUPATIONS.

The Law of the Connection of Contrasts.

There is little doubt that, when Friedrich Froebel is more fully understood, he will be recognized as one of the greatest educational geniuses of the 19th century. Many before him had felt as strongly the need of training for infants and small children, but he saw more clearly than all the fundamental principles of individual development, and the educational means of attaining it. Many had felt the intrinsic value of the play instincts of children, but he alone has taught the world a practical method of using these instincts for the complete unfolding of each individual child. Pestalozzi recognized the inherent necessity of utilizing the impulse to play, but in his eagerness for social and moral reform he turned it to industrial channels. Rousseau, also, urged the demand for free activity and play, yet he omitted the social element and did not perceive the necessity of directing, or at least controlling, the plays of little children. In Froebel, then, we have the best word ever said on the plays of children and how they may be encouraged and conducted in channels of educational value. In his gifts and games there is a complete system of connected materials for the use of the child. They are designed to satisfy the instincts for building, for representing, for training in habits of usful work, and for developing the intellectual and social instincts. We may not agree with the choice, still, it must be granted, it is the best complete system that has ever been devised for the free all-sided development of infants from three to six years of age.

The first important question for our discussion is, naturally, for what purpose did Froebel design these twenty gifts and occupations? It is very fortunate we have his own explicit statement. He desired to meet two imperative needs: first, to arouse in all parents and teachers a deep interest in the education of little children, and to give them an opportunity for their own mental culture; and secondly, the necessary means for the mental nourishment of the children themselves. In drafting the plan of the kindergarten, he writes: He desired "To provide plays and means of employment (consequently of culture) which satisfy the needs alike of parents and child, of age and youth, of educator and pupil; which, therefore, nourish and strengthen, develop and form the life of the children, as well as promote the life of the parents and adults—or at least, afford them spiritual and intellectual nourishment while they employ themselves in playing with the children—indeed, we might even say while they, as experienced and intelligent parents, and observant and clear-sighted older people, merely observe the plays and spontaneous employments of these children in a thoughtful manner—that is, with spiritual and intellectual sympathy."[1]

Froebel had two most essential objects to gain; he planned not only for the children but quite as much for the parents and teachers. He aimed to furnish adults a means for their own intellectual nourishment, and also to arouse in them a permanent interest in the development and education of their young. No desideratum is more necessary to-day. But while Froebel was responsive to the profound necessity of bringing parents closer to their children; that we should "live with our children;" he believed that this union must be mediated by a common interest in some third object, the gifts. This is an erroneous and injurious belief that holds that the child and the adult can normally be interested in the same circle of experiences, only that the child's circle is smaller than that of the adult. A similar fallacy on the physical side has been that the child is merely a diminutive adult, and needs merely to grow proportionally in all its members to become an adult. But the child's interests are *sui generis;* they do not differ from the adults merely in extent, but more in kind, not only in quantity but in quality. This error on the part of Froebel has been the cause of some serious defects in his system, as we shall endeavor to point out.

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[1] Froebel: Pedagogics of the Kindergarten, p. 18.

Starting out with the purpose of constructing a series of gifts for the adult and child, Froebel used as his guide a principle which he and his followers believe to be the most pregnant and fundamental law of the cosmos. "The law of development," he said, "is the general natural law of the macrocosm, and the law of development through self-activity, productivity, is the highest law of the Makroanthropos and the Mikroanthropos."[1] This law is of paramount importance for the kindergarten philosophy. It is the shibboleth of its devotees. Froebel called it the "Stecken und Stab" on which he "als Erzieher aufgeschwungen hat." It is at once the ready explanation of the universe, a religious cult, a psychological theory and a scientific fact. They believe that its validity is such that one of the greatest leaders has prophesied that "By and by, Froebel's educational law will be accepted as distinctly and independently as Newton's law of gravitation."[2]

How this principle arose in the mind of Froebel is partly veiled in obscurity. It is in some respects the result of his own mental activity, but also the product of the philosophical atmosphere of his day and Fatherland. In such a discussion one must keep in mind that Froebel was scientist and philosopher, mystic and logician at the same time. One must also remember that he lacked the ability of expressing his thoughts clearly and in the language of his contemporaries. That Froebel owed this law to his contemporaries and that he worked it out independently in education we may accept on the authority of

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[1] Hauschmann: Friedrich Froebel, p. ix.

[2] B. von Marenholz-Buelow: Reminiscences of Froebel, p. 237.

Koehler.[1] He has shown that it is the law of polarization of the philosophy of identity of Fichte, Schelling and others.

To understand Froebel's theory of education or the materials which he has invented, it is necessary to hold in mind his general philosophical views; for from these philosophical conceptions of the universe he has deduced those vital and fruitful principles which mark him as a seer. This is also necessary for an adequate comprehension of the law of contrasts now under discussion.

Froebel may be said to be the first monistic theorist who has systematically applied his philosophical conceptions to education. He introduces us at once to his views in the first words of the "Education of Man."

"In all things there lives and reigns an eternal law. . . . This all-controlling law is necessarily based on an all-pervading, energetic, living, self-conscious, and hence eternal Unity. . . .

"This Unity is God. All things have come from the Divine Unity, from God, and have their origin in the divine Unity, in God alone. . . . All things are only through the divine effluence that lives in them. The divine effluence that lives in each thing is the essence of each thing."[2]

Now this divine energizing "Unity," in whom we and all things, "live and move and have our being," is constantly expressing his nature according to one uniform and universal law, which can be seen alike in the form of the crystal, the evolution of the vegetable and animal species, and even in the mental and spiritual life of man. This law of contrasts is the supreme formula of the universe of matter and mind.

According to this all-prevading principle of creation, every object, state, or quality has its opposite; in other words, every thesis has its antithesis, and both of these disappear in a final synthesis. Many concrete examples may be given, for Froebel took a delight in elaborating this logical process in every direction. In a conversation with Diesterweg, he said: "What other objects of our knowledge exist but God, Nature, Man?

"What other task can our intellect have than to find the relation between these three sole existing objects?

"The first thing for the human mind is, to draw the synthesis, God in nature, nature from God (the history of creation); then follows the synthesis, the divine spirit in humanity, the human spirit from God."[3] Again, in another place: "The law of connection is the fundamental law in the universe, the fundamental law of the visible and the in-visible, of the spiritual and of the corporeal world, man and humanity are the representatives of this law, for man and humanity stand in the universe between God and the creation."[1]

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[1] Koehler: Die Praxis des Kindergartens. Band III, p. 42.

[2] Froebel: Education of Man, p. 1.

[3] B. von Marenholz-Buelow: Reminiscences of Friedrich Froebel, p. 185.

This law of Froebel is, therefore, nothing but the logical principle of analysis and synthesis which, educational psychologists affirm, governs all mental operations of the child and adult alike, and must be the guiding principle in the choice and arrangement of the materials to be given to the child. But the characteristic which marks Froebel's use of the law is, that for him it is not merely the process by which the human mind takes up and works over its knowledge; it is for him the universal law of all development. It governs the unfolding of natural objects as well as the human mind. By it the tree grows. "The seed (unity) divides in the germ into duality (difference or opposition), and all the various stages of development follow definitely and clearly to full completion. The roots and the crown are the opposite equivalents." These two opposites in the phenomena are connected by the trunk.[2] By this law the crystal forms, by it language grows. By it the child unfolds into the adult human being. By it all growth and development, whether of organic or inorganic, of mental or spiritual existences takes place.

Whatever may be the worth and application of such an abstract principle of logic for the theory of knowledge or for metaphysics, it is not our business to inquire here. But it is certain that it led Froebel and his followers into some absurd and fantastical statements. He did, in fact, become the victim of his own speculations. He contracted the habit of seeking in all the phenomena of the world the operation of this mystical law. Instead of acquiring a larger knowledge, fresh facts to stimulate the mind, symbolist that he was, he was satisfied to turn over the old formulas, intent on finding in them the hidden meaning by which to unlock all the mysteries of the universe.

That Froebel's mind tended in this direction we cannot doubt, when we consider how indefatigably he labored to impress this process upon all departments of knowledge and life. A good example of this will be seen in his theory of the development of language. It consists for him of words, or symbols, that form the "connecting" link between the subject and the object, or, between the outer and the inner world. A further distinction is made between vowels and consonants. "In general he arrives at the law that vowels represent the inner, or unity; consonants, the outer, or individuality; and semi-vowels, the mediations, or diversity.[1]

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[1] Froebel: Education by Development, p. 31.

[2] B. von Marenholz: *ibid.*, p. 31.

It may be more pardonable for one with such a predominantly symbolic and mystical habit of mind to entertain such naïve ideas, particularly when he has also a profound insight into the development of the human soul; but it is far less excusable in others. If Froebel was extravagant in his applications of this principle, some of his followers have outrun him in the same extravagance. Even so careful a thinker and so beloved a teacher as the Baroness B. von Marenholz-Buelow must be charged with idolizing and worshipping this logical fetish. She went so far as to apply it to the most common actions of life. "Our muscular system," she tells us, "consists of the so-called contracting and extensor muscles, which form a connection of opposites by their functions of drawing in and stretching out. The combination in which they appear in the organism is the connection of the opposites. Now when, in the gymnastic exercises, we tell the children to stretch out their arms and then draw them back, cannot they comprehend that they are connecting these opposite functions?"[2]

This service of explaining how the muscles of our arms and limbs proceed, may be harmless enough, but when this law is forced upon the child and becomes the strait-jacket in which he is compelled to act, then we must call a halt. Every one to-day is aware that in drawing the child makes best progress when he has the utmost freedom of movement and choice. But the law of contrasts distinctly forbids such freedom. "Without applying this law," we are informed, "a child would not be able to form any regular figures, still less to invent them. With this law he has received a regulator for the formation of his figures, which leads him on to almost inexhaustible variations and modifications."[3]

We would be much afraid that after all we are fighting "extinct satans" were it not true that, although the extreme applications of this law to creative activity has been abandoned, it is still very much alive in other departments of educational theory. We must examine its value as a basis for the choice of materials to be presented to the mind of the child, and this brings us face to face with some of the most naïve forms of the Froebelian symbolism.

In choosing and arranging the forms that make up the Gifts and Occupations as a connected, coherent, and logical series,

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[1] Froebel: Education of Man, p. 216. (Hailmann Edition.)

[2] B. von Marenholz-Buelow: The New Education By Work, p. 62.

[3] Goldammer: The Kindergarten. A Guide to Froebel's Method of Education, Gifts and Occupations. Introduction by B. von Buelow. Translation by Wm. Wright. pp. xxiii.

Froebel had three main conditions to satisfy. In the first place he felt that the child must not be confused by having thrust upon his attention an innumerable array of natural objects. Nature is so prodigal of her beauties; she calls the child from one interest to another in the most capricious manner. But just for this reason the intellect of the child must be protected from the "variety and multiplicity of things." The attention of the child must be directed from the vast array of objects and must center more and more in the "ever living unity that is in all things."[1] And finally, it is of the most essential importance that the child should be led on to self-consciousness in a manner perfectly clear to himself, and he must, therefore, have mirrored to him, in the outer objective world, the logical processes of development in his own mental life.

It will be of value for us to take a closer view of these three requirements and thus discover wherein they have importance. Let us then consider each from the Froebelian standpoint and reserve our discussion for the end.

Froebel was a most enthusiastic student of all the phenomena of nature, and never ceased to believe that the study of natural objects must be a veritable corner stone in the educational structure. Moreover, he was not merely an interested, but casual, observer; his mind, in spite of his symbolic bent, was of a scientific cast which sought to formulate in scientific conceptions the facts of the outer world. Consequently, he felt that the child would be confused by a conglomerate series of experiences and observations of animals, trees, plants, stones, and a host of similar things. His experiences must be limited, or, at least, regulated, in such a way that these innumerable stimuli will fall into something like scientific or orderly connection. In other words the child must have an A. B. C. of objects, and their qualities and relations, just as he must have an alphabet of language and literature. This alphabet of form, color, movement, etc., must come between the child and nature, as the great interpreter, the "Stellvertrater." "By herself nature, with her phenomena, on the one hand, stands too close to human beings; on the other, she is too far removed. Therefore, the child has need of a third mediating element, which, as it were, unites in itself the properties of every microcosm (Gliedganzes) of nature and of the child as the microcosm of the absolute life (All-Lebens). This third element is the ball."[2] Thus we see that in obedience to his great law Froebel places between the two opposites, the child and nature, the ball, which is the key stone and foundation of the Gifts and Occupations.

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[1] Froebel: Education of Man, p. 134. (Hailmann edition.)

[2] Vortrag Froebel's gehalten in Gegenwart Ihrer Majestät der Konig von Sachsen, Januar, 1839.

Furthermore, Froebel believed that it was most essential for the child early to recognize this all-embracing law in its inner self and in all things. The most natural starting point for building up a circle of thought is, therefore, to begin by presenting to the child a representation, or symbol, of the original "Unity." For this reason Froebel chose the ball as the first plaything of the child, and hence it has become the center and fetish of his system. For him "Even the word Ball, ... is full of expression and meaning, pointing out that the ball is, as it were, an image of the All (der B—,all ist ein Bild des All)."[1]

The ball represents the primal unity of existence out of which all being springs. From this starting point we must pass to the "Sphere" which is the opposite of the "Ball" in many respects.[2]

From the sphere it is but a step to the cube through the cylinder as the mediating link uniting them. In this manner Froebel worked out his whole system of kindergarten materials, by analysis and synthesis, from the solid to the line and point, and back again through figures without solidity, from the simple to the complex, from the generic to the individual, and from the known, as he thought, to the unknown. This movement is, in fact, nothing but the greater unfolding of the cosmological development of the universe from God, the absolute "Unity," to the multitudinous diversity of natural and spiritual existences. As the Baroness von Buelow has expressed it, interpreting her teacher: "That is to say imitating God's world in miniature so to organize material that it satisfies the human need, or realizes a thought of beauty, or facilitates knowledge, and thus forms in the actual that which makes the subject-matter of human life, and all this according to God's law of formation or the law of creation."[3]

At length we come to the most subtle element of the Froebelian symbolism. A third requirement is essential in these gift play-materials. They must represent the cosmological development of the universe from out the original, undifferentiated unity, it must also give an objective picture of the unfolding of the divine spirit in humanity and in the individual human being, that is, of the development of the human mind. The child unfolds from the "unconscious rest in God" to consciousness, and from consciousness to self-consciousness, to attain which is the supreme effort of the "Divine effluence" in each individual. At the same time this is the aim of the education of the infant and also of the entire race. Froebel then believed that the best means of leading the child to self-consciousness is to give him a series of playthings which will objectify to him the development of his own inner mental life: in other words, "a mirror" in which he can see, and feel, the same processes that are going on in his own development according to this law of contrasts, or analysis and synthesis.

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[1] Froebel: Pedagogics of the Kindergarten, p. 32.

[2] *Ibid.*, p. 69.

[3] B. von Marenholtz-Buelow: Reminiscences of Friedrich Froebel. Translated by Mrs. Horace Mann. pp. 215.

With this review of Froebel's fundamental theses and principles it is possible to give them a juster evaluation.

His first presupposition is, that "the great abundance of these things which present themselves chaotically" to the child's "unpracticed senses makes the earliest work of the human soul a difficult one, and the impressions received are therefore indefinite and confused." This doctrine is still amongst us when we are told that the first consciousness of the infant is a "big, buzzing, blooming confusion." Whether this conception be true or false does not essentially concern us here. But it can be said that the facts of infant psychology, and the further testimony of neurology, would lead us to infer that the infant does not wake up suddenly from its unconscious sleep to find itself the confused victim of innumerable stimuli. The infant mind cannot be assumed to have the mental background for such a confusion to arise. Be this as it may, it must be contended, however, that Froebel has departed from his own best judgment, when he places between the child and nature a barrier, which hinders the child from coming into direct contact with those objects which are necessary for its mental development. The A. B. C. of objects, their properties of motion, weight, color, form, sound, and number, cannot be learned apart from the objects themselves. The perception of these properties is not cultivated by an abstract series like the Gifts and Occupations. The child must come face to face with nature in all its forms if it is to gain the sure foundation for its mental advancement. His senses can only be trained by free exercise upon the "manifold" objects of the animal, vegetable and inorganic worlds, as well as the phenomena of human civilization. Froebel, in spite of his theory, believed this and practiced it in all his schools and in the kindergarten. There is now evidence that this need for nature study, which has been so largely overlooked, is coming into prominence in kindergarten circles. A leader says: "Froebel's Gifts and Occupations, necessary as they are, can never wholly take the place of natural things, nor can they even be used in the kindergarten as the sole agents employed in a first course from which the children are to be graduated into nature study.

I value the Occupations and believe that, modified, they have their place. But before, and above these tools, I believe in Nature."[1]

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[1] Proceedings of the National Educational Association. 1896, p. 510.

No bolder conception has been attempted in education than Froebel's effort to instill into the infant consciousness, from the first moments of life, by the symbolic method, a universal theory of cosmology. It was to be a royal road to learning. Froebel certainly did not believe that the infant could fully enter into all the meaning of the symbols. He knew that philosophy is an adult product that must come at the climax of education as its crown, and not at the beginning. But he did believe that "premonitions" of such a philosophy should be implanted in the childish mind by these symbols. "We must render perceptible to the child the unity of the world, absolute existence, the world within; and these in an earthly, human, childlike, intelligible fashion. Unity must be perceived in variety, absolute existence in phenomena, harmony in melody, the soul in the body—in a word, all things in all things—and this through many-sided harmonious active life and work. Such things we have to give to children through the system of ordered games and occupations which I have created."[1] It is scarcely necessary to discuss this proposition any further. Likewise the fantastical thought that the child requires an objective representation of his own mental growth cannot be taken seriously.

There remains, however, the original proposition that the materials to be presented to the child, as likewise to the matured intellect, should be arranged according to the logical principle of analysis and synthesis. After all this is the fundamental fact of the Gifts and Occupations, this is the vital principle. They grow, the one from the other, in a simple, logical manner. The ball represents the simplest object and from it easily and logically comes the sphere, from this the cylinder, from this the cube, and then all the other gifts in turn. These gifts are thus connected in a necessary way; they pass from the known to the unknown, from the simple to the complex, from the generic to the concrete, which accords with the basal laws of pedagogy. To attempt to refute these accepted principles of the operation of mental processes would be folly. It is, however, necessary to inquire whether the minds of infants from three to six years of age obey these same modes of mental activity.

In the first place, then, it may be stated that the analysis of the materials in the gifts from the solid to the surface, and from the surface to the line and point is a strictly formal and logical procedure. Similarly the process of synthesis through the Gifts and Occupations is a process which calls for the exercise of a purely logical connection of ideas. But the infant has no capacity for logical connections and distinctions. The power of logical and abstract thinking comes out late in the adolescent period, the gifts would antedate it by many years. The infant from three to six is in the sense stage; he must see, hear, feel, smell, taste, and touch the objects of his environment. He does not associate objects because of their logical connections but by their space and time relations. Again, the child of this age does not have sufficient power to abstract qualities from the objects in which they inhere. This assumes a vast advancement on their part, a stage in abstraction which they have clearly never reached. Infants do not learn the different colors apart from the things, nor number, nor form, nor any quality. But just here is the great error of the gifts; they teach these abstract conceptions apart from the objects in which the child most frequently observes them. This capacity for abstract thinking may safely be trusted to show itself in its own time and in its own way, but must not be stimulated too early.

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[1] Froebel's Letters on the Kindergarten. Translated by Michaelis and Moore.

There are two methods of choosing and arranging the materials, that are to be presented for the child's education, the logical and the psychological. The clearest example to show this distinction is drawing, although a common example is found in language. Logically, in drawing, the child must begin with the straight line; it is the simplest of all figures, and would thus seem to be easiest for the child. When he has drawn the first line, he must place "opposite" to it a second, like to the first, then will come the "connecting" link between them. The child is already on the fair road to Froebelian art. This is the logical method not only for drawing but also for sewing, building, and the other employments. But this is directly contrary to the psychological, or natural order. The first childish attempts at art result in mere indefinite markings; if any are straight, however, it is by an unhappy accident. From this scribbling stage the young artist passes to represent some object in his immediate environment, which has impressed him,—possibly it will be a man. An irregular curve will do service as the head, and two meandering lines will make a satisfactory body and limbs. Later he will correct these more and more as his ability increases. But so far as the logical method is concerned it may be pointed out that it demands the child to begin with the straight line which is purely impossible for the child for physiological reasons. This pregnant distinction has far reaching implications for all pedagogical presentation, and must be observed in selecting the activities for the infant's education.

The answers from the practical standpoint to the question whether the Gifts and Occupations convey to the children any of their symbolic meaning, and whether they grasp any of the essential unity and logical connection, only expert testimony can decide. But, fortunately, the evidence, so far as it has been gathered, fully bears out the theoretical conclusions toward which our argument has led.

From a study of the replies of kindergartners to an extensive questionnaire issued by President G. Stanley Hall, one must conclude that there is still much confusion regarding the exact significance and value of the Frobelian symbolism. A few have arrived at a distinction between what one terms "lower symbolism" and the "representing and apprehending of a spiritual idea in a material form." The "lower symbolism" is nothing but the common childlike impulse of all children to make some inanimate object, as the ball, or the handle of a broom, do service as a "pony" or "bird." This symbolism, if such it may be called, can be illustrated by "thousands of instances." Every kindergartner is familiar enough with this trait of children. On the other hand the higher symbolism is regarded as entirely foreign to the child, and appeals only to the adult. This is the true Froebelian symbolism which would have the ball represent the original "Unity," "The multiplicity in Unity" and the inner life of the child. It is this abstract form of symbolism that leads one kindergartner to say, "the symbolic value sometimes ascribed to the kindergarten material amounts to superstition."

The mathematical and logical basis of the gifts and their analytic and synthetic character deserves a notice from the standpoint of the practical kindergartner. There exists the utmost unanimity among the 37 returns that in drafting a programme the "dominant interests of childhood" must in every way take precedence of the "logical use of the material." But there is yet a feeble majority who attribute some slight weight to logical considerations. The final opinion may be expressed in the reply of one: "Oh, dominant interests first, by all means. I cannot possibly use the material logically as I should, or as Froebel meant."

The agreement of practical opinion with our theoretical conclusions in condemning the "logical use of the materials" and the mathematical ends, is so marked that it is suprising to find that there is still a conflict regarding the value of the principle of analysis and synthesis. But kindergartners are very loath to acknowledge that no logical connections of materials can be appreciated by the infants, and that they are entirely useless, if not positively harmful. The only connections between the materials that are valuable are those that are wholly evident to the child, and these are merely the relations which the materials bear to the purpose for which he wishes to use them.

Extracts from these replies read thus: "The analysis and synthesis is suggestive to the teacher . . . but is nothing to be taught to the child;" It "is only valuable to the teacher;" "Is valuable educationally only to a very limited extent to the children;" "Great value for older people. It puts a soul into the material. I do not feel sure I know of a case where a child has appreciated the connection;" "Most positive educational value;" "Enables the child to discover himself;" "I think it has great educational value for both teacher and pupil, opening up a little world of evolution;" "Produces mental growth;" "Yes, it exerts a strong influence on the minds of children, making them logical and reasonable;" "Has educational value . . . develops thoroughness;" "For the children it is an unconscious education, to the kindergartner the process is a conscious one;" "Immense value, first, for teacher; she learns to think in an orderly way. It affects the pupils in the same way. Alas! Alas! I can do it so very incompletely."

What then is the result? The majority are convinced from practical experience that this analytical and synthetical process of the Gifts and Occupations is of value to the adult, and of none, or "very limited" value to the children. A minority, which must be acknowledged as vigorous, has decided that these logical processes do have importance for the children. But I do not believe it. "An unconscious education" of this kind is a mere subterfuge. We do not wish children to be "logical" and "reasonable." In fact all lovers of children must rejoice to hear from the kindergartner, who, as if in despair at her failure to transfer her own logical associations bodily to the children, cries out "Alas! Alas! I can do it so very incompletely."

It is impossible at this point to enter into a fuller discussion of the Gifts and Occupations. Many important inquiries must be left unanswered, while only a few can be taken up again in later sections. The real value of the gift building-blocks for the creative imagination of the child is beyond estimate and will be mentioned later. The inquiry into the modifications of size, shape, and the use of the gifts ought to be given a complete treatment, for it has implications at once hygienic, pedagogic, and psychological.

A final statement of our conclusions up to this point is a matter of special interest and difficulty. At least three things stand out as evident:

I. The Froebelian Gifts and Occupations as a coherent logical system, exemplifying the law of the connection of contrasts, or analysis and synthesis, is of no value whatever to the child.

II. The symbolic significance of the gifts, representing a monistic cosmology, the Unity in diversity, and multiplicity in Unity, is only a poor shift to give to adults a naïve philosophical system. It has absolutely no meaning for the little children from three to six years of age.

III. It may be added that a complete distinction must be made between the interests of the child and the adult, and this difference must be recognized by a distinction between the logical and the psychological method of selecting the kindergarten materials.

We now see that Froebel, a most masterly educational philosopher, has made some serious errors. He has taken the ball from the free play of the child to make it the prime symbol of his philosophical credo. It must be stripped of its colors and the burden of symbolic meaning, and returned to the child to romp and play with it freely in field, or street, in house or yard. Froebel seized it from play that it might become a medium of philosophical and scientific knowledge. The ball and the gifts ought not to be a curiously devised text-book of mystical laws, but playthings; not symbols disguising hidden truth, but the means for creation and construction. These playthings, therefore, fall apart for the child into so many unrelated and unconnected blocks and other materials, valuable and interesting only because they can be used for some childish activity which to the child is all important.

THE SYMBOLISM OF THE GAMES AND PLAYS OF THE KINDERGARTEN.

The New Education was ushered in with supreme emphasis on the parent as the natural and necessary educator. This fact, however, has been too largely overlooked in all but kindergarten circles. The dominant note commenced with Comenius who was the first in modern centuries to conceive of a "School of Infancy" in which the mother is the chief factor. His statement of the educative function of parenthood had little influence upon succeeding generations until taken up again in the great movement from which our own educational activity has sprung. In spite of his bitter denunciation of the unnatural indifference of parents, Rousseau felt obliged to assume that, "As the real nurse is the mother, the real preceptor is the father."[1] Pestalozzi, never knowing any but a mother's care, naturally concluded that with the mother rested the greatest force for the development of the youthful being. It was to his unfortunate "Book for Mothers" we owe the stimulus that aroused the slumbering interest of Friedrich Froebel to take up the mantle of his master and complete his message to his time and country.

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[1] Rousseau, Emile. p. 15.

The unaccountable absence of the slightest recognition of the all-important function of the parent from the current pedagogy of a generation ago called out the rebuking criticism of Herbert Spencer. "If by some strange chance," he proposes the argument, "not a vestige of us descended to the remote future save a pile of our school books or some college examination papers, we may imagine how puzzled an antiquary of the period would be on finding in them no indication that the learners were ever likely to be parents. 'This must have been the curriculum for their celibates,' we may fancy him concluding. 'I perceive here an elaborate peparation for many things . . . but I find no reference whatever to the bringing up of children. They could not have been so absurd as to omit all training for this gravest of responsibilities. Evidently, then, this was the school course of one of their monastic orders.'

"Seriously, is it not an astounding fact, that though on the treatment of offspring depend their lives or deaths, and their moral welfare or ruin, yet not a word of instruction on the treatment of offspring is ever given to those who will hereafter be parents."[1]

Such a criticism would hardly have been framed so hopelessly if the author had been acquainted with the German peasant educator, who some years previously had spent his later life in advocating and initiating the training of mothers and kindergartners, and had in this way set in motion a tide that has never ceased to rise. It is a phenomena of no slight peculiarity that this man who never knew a mother, whose childhood was depressed by neglect and lovelessness, who never felt the emotions of parenthood, should become the bearer of a new and higher conception of motherhood and parenthood. To Froebel education was a passion, and in his later years the education of the nursers of infancy was the master passion.

Every catholic conception of education, in its widest aspect as the evolution and progress of the human race, must have something to say regarding the best means of developing the instinct of parenthood. Too many fathers and mothers are grossly indifferent to the welfare of their offspring. Closely related to this is a problem of the greatest moment to the kindergarten. The kindergarten is responsible for furnishing with suitable and adequate equipment those parents whose sense of duty has been awakened to an earnest desire to do the best for their little children; to whom these little ones are not merely bodies to be gaudily clothed, housed and fed, but, more important by far, intellects to be nourished by human knowledge, and souls to be warmed by human association and affection. To help such parents was the prime motive of all Froebel efforts, and it is the chief object of the "Mutter und Kose Lieder."

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[1] Spencer: Essays on Education, p. 264.

It must be evident to any intelligent observer of kindergartners, or of those mothers who have felt its charm, that this crude volume, with its cras engravings, its rude poetry, and its fantastical symbolism, and utter lack of connection, has been nothing short of a revelation. The kindergarten "Bible," as it has been fondly termed, must be credited, to some extent, at least, with the inspiration which arouses that enthusiasm which turns the drudgery of teaching into a delight. One is led to inquire, however, whether a better result might not be gained by more systematic treatment of the work of child culture? Will not mothers respond more heartily to a rational interpretation of the intensely interesting phenomena of infant unfolding? It would seem that every intelligent parent must be more fully aroused to the transcendent importance of his task through the scientific literature on the development of infants which many of the best thinkers of our generation have produced. It is scarcely creditable that this great work of guiding mothers to read their own instinctive impulses toward unfolding the outbudding life of their little children must be handed over to the strained analogical and symbolical interpretations of Froebel. A passing stricture is also necessary upon many of the commentaries on the Mutter und Kose Lieder that have appeared in recent years. The naïve simplicity of the Froebelian thought has become the text for all manner of elaborations under the pretext of explaining and simplifying the original. It is past belief that one would venture to offer to earnest mothers, or kindergartners, who are seeking guidance in the practical training of their children, the esoteric phrases of a particular school of philosophy. There may be a coterie of adherents to these systems to whom the language bears some hidden or imagined meaning, but it certainly cannot do more than confuse and discourage the efforts of the intelligent mothers who have never been tutored in the tortuous paths of scholastic philosophy. The excursions, too, into every corner of heaven and earth to lasso together into a strained relationship numerous ideas on the basis of some insignificant analogical resemblance cannot efficiently assist mothers and kindergartners in training small children.

There has been an erroneous impression in the kindergarten that Froebel's Mutter und Kose Lieder was intended for children. There is no evidence either in the work itself or in the other writings of Froebel to lead to such a conclusion. It is primarily a work intended to furnish mothers with a knowledge of the manner in which they may educate their infants and also to stimulate the nascent motherhood of all young women.

In this work Froebel emphasizes three predominant elements which enter into the training of kindergarten children. First, he lays more or less emphasis on sense training; secondly, he suggests the basis for the early motor development, and third, resulting from, and embracing these, comes the symbolic education, or the intellectual and moral education that is symbolically aroused by means of plays. These plays and games are the symbolic means by which the children are presented with the conceptions of home, society, church, and nature; on the moral side they are the germinal impulses of the moral sentiments.

The fundamental importance of sense impressions has received a large share of attention in all the general treatises on pedagogics. Its essential position in the psychology of education can never be too much reiterated. Since the accession of Herbartian pedagogical theories among American educators there has been a strong tendency to minimize the value of perception, or Anschauung, as Pestalozzi called it, in favor of the later doctrine of apperception. This Herbartian contribution to the undeveloped theory of Pestalozzi is of the utmost importance, but when the new doctrine throws sense perception into the background there can be no good result. Apperception itself rests upon sense perception both in the psychological genesis of knowledge and in the individual mental processes.

It is worth our while to pause here to get these facts into their proper relation, and it will be important to make clear that it is not to Herbart, but to Froebel that we must look for the statement of the primal relation of perception to apperception.

All our knowledge in the last analysis must have some radical connection with the simple perceptions that come through the different senses. The Herbartian pedagogy is the pedagogy of the youth and not of the infant; it assumes that there are already apperceptive centers in the mind to which the new facts of perception are to be related. But in assuming these "given" apperceptive centers, they obscure the great truth that these centers, so-called, or apperceptive masses, have grown up themselves in the mind of the child through a long process of time. The infant does not have these centers to start up his intellectual banking system, he must acquire them. In their genesis they are merely the outcome of previous sense impressions organized by the individual mind in its own peculiar way.

But what then is the method of apperceiving in the infant who has not the mental background to which he can assimilate the new fact given by experience? Here the Herbartian theory gives the kindergartner little help. But just here Froebel is to the rescue with the true setting of both perception and apperception. He contends that it is through the motor functions aroused by imitation that the mind begins to react upon its environment in an apperceiving way. The apperceptive centers of the infant are, in a very real sense, found in the muscular and nerve reactions which the child makes in imitating any motor activity.

To clarify this truth let an example be given. Assume that a young child and a youth both have a visual perception of a bear for the first time in their history. The problem is, how will they each react to this new fact from the mental side? The youth has seen a large number of animals of many kinds; he has doubtless heard many stories about bears, has formed a vague mental image of some kind, an image compounded from the menagerie of animals that he has already seen; this youth may even have seen a picture of a bear, and heard a good description. He has a full panoply of mental processes to bring to this novel experience from his senses. But not so with the infant; his repertoire of animals has been confined to the horse, the dog, and the domestic cat. No stories, no images are ready in his mind to arrest the incoming experience. How does the child react? He has nothing to which he can relate this perception, but, on the contrary, has to form the centers which the boy already possesses. According to Froebel, the child would react either at once or when the time is ripe, by imitating the actions of a bear. He would walk on all-fours, crush his victim between his paws and generally carry out the activities he has observed. "Whatever the child imitates he is trying to understand." The only way the child can understand the bear is to reproduce in his own nervous and muscular mechanism the activities of the copy. His apperception is the muscular and nerve reaction.

Suppose this time it is a noise from some unknown source. The youth on hearing it links it with other similar or diverse sounds, as the case may be. To him it is like such a sound, or unlike that; his apperceptive centers for sounds of various kinds are developed. In the infant, provided he is not aroused to fear, the mental phenomena will be otherwise. For him the great thing will be to reproduce the sound and thus gain the reaction of his own muscular efforts and his own voice.

It remains to be said, however, that the Mutter und Kose Lieder represents in a most fragmentary way the thought of Froebel in regard to the training of the mind through sense perception. Likewise the educational value of motor training. which reached its high tide in the Froebelian Pedagogy, is very inadequately and unsystematically represented in this work.

The symbolism of the games and plays of the kindergarten is a late acquisition to those American kindergartners who did not read the Mutter und Kose Lieder in the original German. But the recent translations and commentaries have diverted the kindergarten from the impress of the older enthusiasts who exalted the Gifts and Occupations. The greatest problem for the kindergarten to-day is, does this new emphasis, lately thrown with such remarkable eloquence upon the symbolical element of the games and plays, present the true line of advance for the education of kindergarten infants? To discuss this question two investigations are essential: first, an impartial examination of the Froebelian symbolism of these plays and games must be made; and secondly, a thorough reconstruction of the pedagogics of the kindergarten is necessary in conformity with the latest studies in psychology, pedagogy and the biological sciences.

A symbol, in the strict sense of the term, consists in representing some abstract mental conception by some actual object that is concrete to the senses. A flag is the symbol of the national unity; a lion is the symbol of strength; the eucharist is the symbol of the body and blood of the Lord. In this sense the fact is to be noted that all symbols are the product of the adult consciousness, never of the child consciousness, that has not advanced to clear abstract conceptions. To the child the lion is strong; but he has not abstracted the quality of strength from all the host of concrete things that are strong, and then made the lion stand as the emblem of the abstracted term, strength. The Froebelian symbolism is not of this simple nature. The key to it must be sought in his philosophical intuitions on the one hand and in his intense interest and study of human development on the other.

To bring the symbolical interpretations of the Mutter und Kose Lieder into a rational order is utterly impossible. Neither the games, which form the basis of the work, nor yet the lessons which they are presumed to give, have any sequence or connection. It is not important to write a detailed refutation of the symbolism of each individual play. For the purpose of criticism some grouping, however, is necessary. A classification may be made of those plays which are supposed to instill some intellectual lesson, and secondly, those which have, according to the Froebelians, an important value for the moral life of the child. The plays of the first division may be sub-divided into those classes which mirror to the infant his own inner life, and those which present to his mind symbolic representations of nature, the family, social and industrial life, the State and the church.

In dealing with the plays that relate to family life Froebel pushes back from the individual factors, such as the father, mother and children, to bring into prominence the abstract relations in which they stand to one another. It is not the mere images of the father or mother, their actions, etc., but their paternal relation to the child and his filial relation to them that must be uppermost in the education of the child. This relation of dependency and need can best be brought home to the infant mind, according to Froebel, when objectively portrayed in a concrete way, as in such a game as the bird nestling over its young brood. Furthermore, the family must be seen by the child to be a unity of individual members and not a mere aggregate. Its relation to society and to humanity in general must be also symbolized in plays. Likewise in the portrayal of society and industrial life Froebel seeks to present to the infant's mind the higher social relations. In many of the games where we would expect him to bring out clearly the incalculable benefit of giving the children a fresh, first-hand view of the simple activities of the industrial world, he turns aside to some "inner excellence" which is not merely disappointing but exceedingly annoying. The main lesson in regard to the social life that Froebel sought to instill into the consciousness of the child is the unity and inner dependence of the race as a whole. The conception of the solidarity of the race as an organism and a unity of development was largely to the fore at the time of Froebel. His own mind was naturally responsive to this new race consciousness, and it is not strange that he used this conception in his educational theory. He would have the infant symbolically led to the consciousness that it too is a member of the race totality, and that he has a very vital role to play in fulfilling his individual obligations to the whole. This most important lesson which is to fit the child thus early to perform his share in human society is not difficult to instill. According to Froebel the child seeks nothing so much as a consciousness of this relation; his plays in the circle typify nothing but this desire of the infant mind.

Froebel's philosophy of nature has already been explained in connection with the Gifts and Occupations, which, as we have seen, furnish the dialectic scale upon which the universe was constructed. The same lesson is presented to the child in a symbolic way in the plays of the Mutter und Kose Lieder. He lays special stress on the unity of natural phenomena and on the casual connections of events.

So far as the moral value of these plays is concerned the symbolism is grossly fantastical throughout. The moral precepts or lessons are not gained from the interaction of the players, as in the case of the games that take place on the school ground. This crude, symbolical moralizing is not merely fantastical and far-fetched, it is equally unnatural and illogical. It is, withal, disintegrating rather than stimulating to the development of the mind of the child. To be constantly directed to some moral consideration from every fact is quite injurious to the mental and moral powers. In the case of these plays this is especially the case, for the child is not left to choose what facts or details of the play he shall attend to, but his attention is forced upon some feature which to him is entirely irrelevant and totally uninteresting.

But in all fairness it may be said that, while one may grant the propositions that have been urged, that the symbolism is fantastical, the moral lessons disintegrating to the spontaneity and the attention of the child, and, finally, that they are based upon the most insignificant features of the plays, yet it does not follow that Froebel's fundamental thesis is in the least disturbed. Froebel observed that many of the plays of the children and infants have a universal attraction for them, and that this enjoyment shows itself in the constant repetition of these games. Every baby loves the kicking game, hide-and-seek, bo-peep, and the long list of nursery games. This interest in these plays is perennial and wide-spread, and must be explained in some way. To Froebel these games stimulate or express certain moral feelings or intellectual awakenings which are of the most transcendent importance for the future of the child. The trouble has grown out of the fact that Froebel persisted in reading into the actions of the child playing these games his own mature philosophical conceptions. He was blind to the fact that there are nascent periods when certain moral and mental experiences arise which had previously no part in the life of the individual. He believed that in the infant in its early years are already active, in a vague way, at least, all the impulses and conceptions that are prominent in later life.

But to return to those songs and games that have for their purpose the stimulating of the intellectual comprehension of the inner connections or relations of natural objects, family life or society, merely a word more will be necessary. It has been pointed out in regard to the similar purpose of the Gifts and Occupations, that these conceptions of "Unity" and "inner connections," are extremely abstract conceptions, and belong only to the adult. Moreover, the child is totally incapable of grasping these abstracted relationships which Froebel thought so necessary for the life of the individual. The same reasoning applies with greater force to the symbolism of the plays. The conception of the family, for example, is far above the infant mind. He may appreciate the concrete facts that he can observe about his mother, he may feel certain emotions toward her, but to grasp the relationship as the adult sees it is certainly not within his capacity. Again, to conceive the deeper relationship of the family and social organism is something which every adult with mature powers cannot do. Yet it is these "inner excellences" that Froebel would have typified to the child.

The problem of discussion is here; we believe just as firmly as Froebel that for the highest living the child must come to a knowledge of the abstract relations of the social organism, and of the unity of the phenomenal world; he must appreciate, if you will, a consistent philosophical basis for life and conduct; but we do not agree that the child in early infancy seeks a symbolical representation of these relations, or that there is in his mind the dim forebodings of the unity of the family, society, and nature. There is every reason to believe that Froebel was wrong in his endeavor to instill thus early into the mind of the child even by what may appear as harmless symbols the abstract, adult conceptions. For this reason we are firmly convinced that the kindergartners make a fatal mistake when they choose the games and plays to typify or symbolize the relations of the family life, human society, the State, the church, and the unification of the objective world.

Not alone is this symbolism now made the basis on which the games and plays are selected for the children, but it is likewise this evil feature that has been exploited so much in recent kindergarten literature to the great detriment of the kindergarten and the influence of Froebel.

But the question is still with us, what are the elements in the Froebelian symbolism that have given such wide currency and truth to its claims, or in other words, what is to be our safe guide in the choice, selection and ordering of the plays and games of these infants of the kindergarten?

Three main factors have entered into the formulation of the kindergarten symbolism. First there has been, on the part of Froebel and his followers, a misapprehension as to the function of traditional games. Secondly, there has resulted a fatal error from the total disregard of the psychological significance of what Miss Blow calls "infant analogizing." Lastly, the overlooking of the function of imitation as the guiding instinct in the mental and moral development of the infant at this period may fairly be counted the cause of most of the confusion.

Froebel and his later disciples have been led to the symbolism of the games and plays very largely from the fact that they have not sharply discriminated between the games and plays of children at different ages. This is natural enough at a time when the plays of every age during infancy and childhood were not so closely studied as at present. This lack of discrimination has been shown by the contention of Froebel and all kindergarten writers that the greatest emphasis must be thrown on traditional games for the infants and not upon those purely imitative activities set agoing by the stimulation from the environment. The views are nowhere better expressed than by Miss Susan E. Blow in her work on Symbolic Education.[1] She writes: "Two distinct and even antagonistic views with regard to the purpose of the kindergarten games seems to be more or less clearly shaping themselves in the consciousness of practical kindergartners, and to be finding expression in the works of Froebel's interpreters and critics? Of these conflicting views one holds that the seed-thought of the Mother-Play is the dramatic reproduction of each child's daily experiences, and that therefore the plays suggested by Froebel must be changed whenever the circumstances and surroundings of the child are changed; the other insists that the procreant idea of Froebel's games is that of accentuating and interpreting pattern experiences, and that the actual supply of such experiences is an essential part of the duty of mothers and kindergartners." The best statement so far of the view that the child must reflect in imitative movements the environment is presented by Mr. Bowen in his work on "Froebel and Education through Self-Activity." Miss Blow, herself, as will be seen from her chapter on "Pattern Experiences," is the leading advocate of traditional or symbolic games and follows very closely the Froebelian cult as it is in his Mutter und Kose Lieder. We hold that there can be no middle ground in this controversy. The one party contends that the child must be presented with the higher conceptions of nature, humanity, God, and the family, with all their complex abstract relations; and this is to be accomplished by selecting certain "pattern" plays which the child must be taught. These pattern plays are the traditional games which have had such powerful influence in developing the Teutonic and Anglo-Saxon races. "The traditional games," Miss Blow informs us, "handed down from age to age, are truer than those of the individual child, because they image a wider life."

However, it has evidently not occurred to the advocates of this view to ask what games the kindergarten children do play, and what games they do not play, when left to choose and act spontaneously. It is this freedom of choice and action at this early age which must inevitably be the criterion of judgment on the kindergarten games. No principle is more intensely vital to kindergarten pedagogy. If is denied that the childish attention is to be trusted to select what is fundamentally nutritive for his mental and moral welfare, then nature and heredity are asserted to be radically false.

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[1] Blow: Symbolic Education, p. 167.

But there is ample inductive evidence to show that the kindergarten children, when left free to select their own activity, do not play traditional games, but show a marked tendency to reflect in an imitative way their environment. Miss Ginerva Sisson reports "a study of the free play of kindergarten children at recess and at noon reveals the fact that the traditional game does not appeal to them at that age. For a year careful observations were made in the city of Santa Cruz. No suggestions were made to the children. During this time the plays were almost entirely spontaneous. They asked for 'Hide and Seek' and played it once or twice, 'Blind Man's Buff' they played several times, 'Drop the Handkerchief' once or twice, but these are all of the traditional games in which they have shown any interest."

She gives as her conclusion from this study: "The kindergarten should not impose upon them from without the form of playing the game, but should let the children evolve it themselves." One reason "why some of the traditional plays fail to hold the young child is because they are out of his environment in space and time." In the same article she reports another series of observations made for the same purpose upon the children at the kindergarten of Leland Stanford, Jr., University, during one entire term. These observations "revealed but one traditional game in which those children indulged, and it was not played more than four times during the term."

She finally concludes: "What makes the little ones care so much more for the spontaneous than for the traditional game? What is it the spontaneous play possesses that the traditional game lacks? It is neither exercise nor the dramatic element. In none of these things does the charm of spontaneous play for the young children lie, but rather in the flexibility and in the relation to the environment of the child permitted where no set form is insisted upon."[1]

In her study of this same problem, Mrs. Burk says of the traditional game: "The traditional games played by the children were: London bridge, pom-pom-pull-away, ring around a rosy, drop the handkerchief, draw a bucket of water, 'booger' man, pussy wants a corner, tag, hide-and-seek, blind man's buff, goosey gander, and wood-tag.

"These games, when perchance they did occur, were introduced at the suggestion of one or two older children and met with very little response among the children in general.

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[1] Barnes: Studies in Education, pp. 171 *sq*. Genevra Sisson: Children's Plays.

"The appearance of the traditional games is quite insignificant compared with the representative and physical forms of play. This fact accords with the observations of Miss Sisson and of Luther Gulick. Gulick places the traditional game pre-eminently in the period from seven to twelve years. The sacred circle of kindergarten paraphernalia certainly does not seem to be based on any natural penchant of children of the kindergarten age for the traditional circle games, for these seldom appear in their undirected or undictated play."

"The kindergarten child is pre-eminently an individual rather than a social child. For a period covering four weeks, record was kept with specific reference to the question whether children played alone or in groups. About 51% of the plays were by individuals, about 26% were by groups of two or three, and about 23% were by larger groups."[1]

There can remain no doubt that the traditional games are foreign and alien to the interests of infants at this age and that Froebel and his disciples have made a mistake in carrying down to this infantile stage of mental development the plays that appeal to children at a later period. The feelings, to which the traditional games minister, of co-operation, rivalry, the struggle for victory, are all missing in the finer forms that appear in the regular traditional performances, and contests. To force these upon the kindergarten child is not to prepare him the sooner to understand these feelings but to render him mechanical and slavish to the dictation of others. He is not yet prepared to enter into these complicated movements and feelings, but requires a long course of training in simpler activities and movements so as to prepare him more fully to understand his environment. We have been accustomed to drag into our guage of the infant mind our own adult conceptions, and do not realize the profound fact that the infant from three to six is almost totally a stranger to all the simplest natural objects of the world about him. Moreover, we do not understand that it demands a long time for him to attain the simplest facts, and that when he does grasp one simple fact it may arouse in him feelings of pleasure and happiness which place him in another world from ourselves. We can no longer form a conception of the delight with which a child at this age enters into his simple horse play. The kindergartners must therefore be extremely watchful that they do not give to children plays above their interests, and thus rob them of their own delightful spontaneous games, and the greater value of their own initiative.

The symbolism of the kindergarten in the form of poetical analogizing has been, without doubt, the most sadly disintegrating to the extreme plasticity of the infant mind. One cannot read the characterization of "The Kindergarten Child" by Miss Carter in the Atlantic Monthly for March, 1899, without feeling depressed at the injury the kindergarten symbolism is working. It is a question whether Miss Carter portrays a condition which is abnormal, but it is certain that this accords in every way with the psychological views and methods of all the literature of the kindergarten symbolism. With regard to the evil results of what Miss Blow calls "infant analogizing," she says:

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[1] Burk: A Study of the Kindergarten Problem. Mrs. C. F. Burk: Play, pp. 49.

"It was in the nature work and object lessons that our enthusiasm over the kindergarten-trained child received the blow from which it never recovered. . . . . Our curriculum included lessons on plants and minerals. We gave out three leaves to each child for a comparison of shapes.

'Children, what have you on your desks?' we asked.

'I have three little boats,' cried Freddie.

'I have three fans,' said Agnes.

'I have a papa, and a mamma, and a baby,' said Ethel.

'I have three plates for the "Three Bears,"' said Harold.

'I ain't got nothin' but three ole leaves,' announced Pat. He, by the way, was so unfortunate as to have missed the kindergarten.

"Another time we gave out pieces of flint for the lesson on minerals.

'Children, what have you on your desks?' we asked pleasantly.

'I have a snowball,' said Freddie.

'I have a little white mouse,' cried Agnes.

'I have a lump of sugar,' declared Ethel.

'I jist got a ole stone,' cried Pat.

'How many of you have lumps of sugar?' asked we. At the suggestion, all of them had, except Pat."

Flowers were called fairy cradles, chairs, houses, hats, etc. Seeds were called baby plants, marbles, etc.

"Nor was this all. Every flower or plant enjoyed ethical characteristics. Some were 'good,' some 'bad,' most were 'pure' or 'noble.' All except the bad ones had been especially created for the use and delectation of mankind in general, and good little children in particular."

She finally remarks: "We therefore set ourselves to work to discover to what extent this training had been accomplished. After much patient observation we came to the conclusion that their imaginations had not been trained at all, but that their suggestibility had been developed to such a pitch that most of the kindergarten children were in a state of half hallucination all the time; that in trying to reach the imagination Miss Bessie had been merely injuring the ability to have clear and precise sense impressions.''

''Infant analogizing,'' as it is termed, presents three distinct phases which the kindergartners have confused as the same mental activity in every case. First come those cases of error from the wrong apperception on the part of the child; secondly, those cases where the child employs some anthropomorphic conception to explain a strange and occult phenomenon; and, lastly, the simple cases where, for example, the child plays with a stick and calls it his 'pony.'

Errors of apperception are a frequent occurrence in childhood when he is mastering his objective environment. From Professor William James the following cases are cited: ''Every new experience must be disposed of under some old head. The great point is to find the head which has to be least altered to take it in. Certain Polynesian natives, seeing horses for the first time, called them pigs, that being the nearest head. My child of two played for a week with the first orange that was given him, calling it a 'ball.' He called the first whole eggs he saw 'potatoes,' having been accustomed to see his 'eggs' broken into a glass, and his potatoes without the skin. A folding pocket-corkscrew he unhesitatingly called 'bad scissors.' '' (James: Psychology, Vol. II, p. 110).

It would be a serious mistake, as we saw in the cases given by Miss Carter above, to train the children still further in this error of apperceiving under the guise of training the imagination. These frequent errors, made by all children in early infancy, are not due to any mental function which must be cultivated. They are due to lack of knowledge and experience, and not to any special peculiarity of the infant imagination. The infant expects a certain reaction from the object similar to what he has already experienced, and he, himself, reacts before he has learned to make the needful distinction between the new object and his old experience, or ''head.''

This error in apperceiving is an activity entirely distinct from the anthropomorphic conceptions which every child forms of the more hidden phenomena of nature. Thunder, for example, is to all children an occult and mysterious thing, and to explain it the child must conform to his own mental experience. It is to him, ''God groaning, or kicking, or rolling barrels about, grinding snow, walking loud, etc.'' Lightning is ''God putting out his finger, opening a door, turning a gas quick, or striking many matches at once.'' This phase of analogizing is entirely legitimate on the part of the child, and has an important bearing in the training of the imagination. The child seeks some adequate explanation for these strange phenomena, and can only appreciate such anthropomorphic conceptions, for his experience is exceedingly limited.

The third phase of "infant analogizing" must be considered more at length.

To see our way clearly after coming through this tangle of misconceptions it is necessary for us to find some new standpoint from which we can interpret the plays of children according to the facts of psychology. Moreover this standpoint must be sought not in the adult experience, as Froebel has done, but by a fresh and careful review of the genetic development of the mind of the infant at this stage. It is the Copernican advance over again; we must seek the center of pedagogics in the child and not in ourselves.

The mind of the child is composed predominantly of perceptions of motions, and of voluntary motor images, and of activities set off by the imitative instinct. This hypothesis, that the consciousness of the infant at this stage is made up exceptionally, or in a large degree, of motor images and responses, is borne out by the great resemblance of children to animals. The animal consciousness must be notably a motor consciousness, and their perceptions of dynamic qualities, so far as visualization is concerned, is much in advance of the perception of static qualities. "It is an established fact, as has been said," writes Carl Groos, "that among animals motion is more provocative of attention than anything else. Further, it is evident, that imitative impulse is more easily awakened by movement than any attribute of a body at rest." (Play of Animals, p. 222.)

But it is needless to draw on the comparative facts from animal psychology and biological science further than to preface the discussion. There is abundant evidence in the psychology of infancy to justify the thesis of the predominant motor consciousness.

First of all, the perception of motions of objects by the child is far in advance of his power to distinguish the colors and forms of these objects. Dr. Tracy found that the perception of motions follows the perception of brightness. This power "to follow with the eyes a bright, moving object," has been observed in one child on the 23d day, and in others as early as the second week. "But most observers have noticed this activity first about the fifth week, some as late as the sixth or seventh." But anyway, long before the infant in arms is capable of perceiving colors or of abstracting forms, he has a great capacity for observing motions of the objects of his environment. On this point Preyer shows that the perception and discrimination of colors is weak and late in development. "In regard to their color-sense, all children who have not had special training in this direction show great uncertainty up to the end of the second year, and even in the third year they often waver in judgment to such a degree that they might be supposed to be color blind." (Infant Mind, p. 13.)

That the perception of motions of the objects within the environment comes thus early would show that it is fundamental. This is not alone true in the individual, but it is equally or to a greater degree true of the biological series where it is of the greatest importance for the evolution of life. This dynamical aspect of consciousness is likewise a most prominent factor in the development of the race in all its phases. An unexpected corroboration of the conclusion that in the race experience and in that of the individual as well, the tendency to perceive motions of objects before their forms, is gained from a study of language. On this point a quotation from Dr. Tracy[1] may be at length. "In other words," he says, "the child of two years has made nearly twice as much progress in learning the use of verbs as in learning the use of nouns; . . . a comparison of the adjectives and adverbs in the two tables justifies a similar conclusion in favor of the adverb. To my mind this fact which, so far as I know, has been hitherto overlooked by all writers on child language . . . . possesses great value for philology and pedagogy as well as for psychology. In the first place it supports the view that the acquisition of language in the individual and in the race proceeds by similar stages and along similar lines. Max Müller says that the primitive Sanscrit roots of the Indo-Germanic languages all represent actions and not objects; that in the race the earliest ideas to assume such strength and vividness as to break out beyond the limits of gesture and clothe themselves in words are ideas of movement, activity. We have found, from the examination of the vocabularies of these twenty-five children, that the ideas which are of greatest importance in the infant mind, and so clothe themselves most frequently (relatively), in words, are the ideas of ACTIONS and not OBJECTS, of DOING instead of BEING. The child learns to use ACTION-WORDS (verbs) more readily than OBJECT-WORDS (nouns); and words descriptive of actions (adverbs) more readily than words descriptive of objects (adjectives)."

The mere fact of the physical growth and the incessant activities of the child at these youthful infant years would suggest to us the same conclusion. The kindergarten age, and it must be insisted upon that this period is a distinct stage of development, is an acknowledged period of very rapid growth of the muscular, and of the nervous tissues as well. It is the time when those sections of the brain cortex connected with motor functions are making their most rapid development, and when the other parts, with the exception of the sense centers, are relatively undeveloped. But the growth and functioning of these organs depends wholly upon their exercise and use by the child. This predominance, then, of motor activities resulting from the movement of the children themselves as well as the perception of the motions of objects, must inevitably result in furnishing the child a large content of motor or kinetic images. As Professor Baldwin[1] says: "The point is this: the child's personality grows, growth is always by action; he clothes upon himself the scenes of his life and acts them out so; he grows in what he is, what he understands, and what he is able to perform."

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[1] Tracy: Psychology of Childhood, p. 82.

It is now a common place in psychology that every mental state has a tendency to pass over into some motor form. What would be more natural than that the child which has a marked tendency to attend to the activities going on about it, should also tend to reproduce these mental images in its own organism in an imitative way? The function and use of this imitative instinct is nowhere better stated than in "The Play of Animals" by Carl Groos, (p. 183.) He says: "I took the ground that it is an instinct which works directly toward the developing of intelligence, since its tendency is to render many other instincts to a certain degree superfluous, and so encourage independence in the individual. This view is borne out by the fact that imitation is the strongest in the more intelligent animals, such as highly developed birds and monkeys, and that man may be called the imitative animal par excellence."

"The actual biological significance of imitative play is not expressed in movements or sounds that are unconnected with the struggle for life, but rather, to put it briefly, in playful self-discipline of young animals in the life habits of their kind.[2]

Professor Baldwin, in the work already referred to above, has well shown that through the imitative instinct there springs up in the child the feeling of personality, and that through imitation only, we can explain the spontaneity and originality and also the early development of the will of the child.

Once accept this dynamic or kinetic characteristic of the infant mind, which is known as the motor type of imagination when it is prominent in the adult, and the psychology and pedagogy of the kindergarten become clearer. This gives a sufficient account of the animistic tendencies of the child; it explains his early attempts at drawing, and furnishes a cue to his delight in stories. Moreover, it explains clearly the imagination of the child which has attracted so much attention, and furnishes us with an adequate view of his make-believes and many of the so-called analogies.

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[1] Baldwin: Mental Development, p. 36.

[2] *Ibid*, 190.

The imagination of the child is different from that of the adult in two chief features. The adult pays more attention to images of form, coloring, and setting; the dynamic element is no longer foremost, except in the purer motor types. In the child this kinetic characteristic is the chief thing; coloring and form are merely secondary. Then, again, there is every reason to believe that the images in the mind of the child are more intense than those of the adult, partly because they are fewer in number, and these are most intimately connected with direct memory images of the particular object, or objects.

It has been customary to write about the imagination of the child as something remarkable and vastly superior to that of the adult, not alone in its vividness but also in its range. An example of this tendency, marked as it is in all the literature of the kindergarten, may be taken from Mme. Necker de Saussure quoted in Symbolic Education. "Mould a lump of wax into a figure or cut one out of paper, and . . . it will be a man in the eyes of the child. The child does not see the imperfect copy, but only the model in his own mind. The wax figure is to him only a symbol on which he does not dwell. . . . Too exact imitations of things undergo the fate of the things themselves, of which the child soon tires. He admires them, is delighted with them, but his imagination is impeded by the exactness of their forms, which represent one thing only; and how is he to be contented with one amusement? A toy soldier fully equipped is only a soldier; it cannot represent his father or any other personage. It would seem as if the young mind felt its originality more strongly when, . . . it puts all things in requisition, and sees in everything around, the instruments of its pleasure. A stool turned over is a boat, a carriage; set on its legs it becomes a horse or a table; a bandbox becomes a house, a cupboard, a wagon—anything." From this language and such similar expressions about the plays and make-believe of children, one would conclude that the 'stool' actually appeared to the child's senses as a carriage or a boat, or at least, that there was an image of the boat present in the mind of the child through the symbol it has chosen. "The simple symbol," we are informed by Miss Blow, "is the product of the unconscious mind, and is the result of the same activity which makes the child ride his stick and call it a horse, or carry it and call himself a sailor." Does the child think, see, or image the stick as a horse? That would certainly be a feat of the imagination.

But in all these examples it must be noticed that these objects are only the means, or tools, by which the child can himself perform some action, by which he is helped to imitate some activity which he has witnessed. He no more makes the stick he rides into an imaginary horse than we make the knife and fork with which we eat into a digestive process. He, himself, by his own legs, is carrying out the movements of the horse, and the stick merely aids in his own activity. All these playthings are only so many accessories which are brought in to help out the child's own activities. They are no more symbols to the child than his spoon is the symbol of a digestive process. The child's own imitative activities are everything. The fact that children forsake a beautiful Parisian doll for a crude makeshift, does not in any way prove "The too perfect toy chills the imagination and hence the child turns from it to objects which by remotely suggesting an ideal heightens the activity of fantasy." The children turn to the "shabby bootjack," or even to the cucumber, as Professor James relates, or to the bundle of rags tied at the waist, because they are freer to handle these and to torment them in a motherly way as they choose. The child feels all these perfect qualities to be unessential, and all he demands is that he be left room for his own activity with the doll.

From this dynamic view of the imagination of the child we can now see very plainly that the Froebelians have made an egregious error. They have concluded that the stick the child rides is for him the symbol of a horse, or that the chair takes a new form at every changing attitude. But they fail to see that the child is, himself, in a very real sense the horse, and the stick and the chair are merely the means which assist him to act the part the better. An example of this error on the part of the kindergartners can readily be found. "So, too, it is, through the creeping, swimming, and climbing motions that he identifies the cat, the fish, and the squirrel with his ball. His stick stands for trees, lamp-posts, and soldiers through the qualities of straightness, and his many fingers on one hand suggest the merging of the father, mother, and children in the union of the family." We have here that form of the Froebelian symbolism which Miss Carter found so demoralizing to her efforts. The child should by no means be taught to call the ball a "cat," "a fish," or, indeed, any object whatever; he should never be taught to identify the stick with a tree, a lamp-post, or soldier "through the quality of straightness," for these do not call out any motor activity from himself, and that is the only justification there can be for the use of the materials of play. If anything must represent the lamp-post, or the soldier, it must be the child, and only the child, that should be used to represent these objects.

This leads to a further very pernicious evil in many kindergartens. Many kindergarten teachers instruct their children to act in their play as sheep, or cows, or some other animal, whose characteristic activities and movements the children have never actually witnessed. Sometimes a small model is shown the child, from which he only receives the lamest and crudest conception of the cow or sheep, and nothing, whatever, of its actions and movements. And yet the child is then asked to imitate the activities of these things which he has never seen. Some one has suggested that there have been cases where the kindergartners have taught the children to represent farmers when they have themselves never seen the operations of farm life, and the children have never had the faintest conceptions beyond city streets and their traffic. Such instruction leads the infant to form the impression, as President Hall found among some Boston children, that the cow is of a blue color, and about two inches in height.

In concluding this review and criticism of the Froebelian philosophy of the kindergarten, with all due respect and charity, we feel compelled to point out that kindergartners, generally, are unduly carried away by this doctrine. It is, indeed, safe to say that there is no philosophical system to-day which counts so many unswerving devotees as the crude and puerile attempts of father Froebel. He set himself zealously to promote the training of women for the profession of maternity, and he has succeeded in this respect beyond his fondest hopes. The kindergarten teachers, the large majority of whom are completely untrained in philosophical thought, as it has developed from the ancient Greeks, accept religiously the philosophical and symbolical basis of Froebel, and cling to it with all the tenacity of the female intellect. Shortly before his death Froebel said he would be satisfied if his principles of educating little children are recognized within 300 years. It would seem that if the kindergartners persist in their conservatism there is every probability that the spirit of Froebel's utterances may be smothered beneath the letter of his methods for even a longer era.

There can, of course, be no objection whatever against the noble women who find satisfaction and help in the naïve metaphysics and sociology of Froebel. The symbolism of the gifts and games which objectify these philosophical conceptions may also be excusable when confined to these adult minds, for which Froebel devised it even more than for the little children. But many kindergartners have deluded themselves that the conceptions demanded for their own mental life are also suitable for the children. Accordingly, the unity and logical connections of the gifts and the plays symbolizing the unity and relation of the family, State, church, society, and nature are everywhere forced upon the child. Many will acknowledge, indeed, that it is an "unconscious" process, a method of "premonitions" awakened into definite knowledge, but they have nowhere shown just what these premonitions are. However this may be, we know not, but we are convinced that it is totally contrary to the real spirit of Froebel, which is for freedom and not dictation.

The Reconstruction of the Kindergarten.

That the Froebelian Pedagogy, as he has himself expounded it, and as it has passed into the literature of the kindergarten, is not always worthy of confidence, and is in many respects out of harmony with modern conceptions of child nature, must now be evident. The right, therefore, of the kindergartners to seek from every source the facts which contribute to a clearer knowledge of their task in educating infants ought to be conceded. The new Pedagogy of the Kindergarten, if it is to have a scientific basis, must take into consideration the contributions of Comenius and Pestalozzi, and the other infant school reformers. It must likewise look for its principles and its *raison d'être* in the facts of biology, physiology, and genetic psychology, in so far as these outline the stages and the course of the natural development of the infant between the nursery and the school period.

The history of infant education reveals more or less distinctly two ideals of culture for early years. On the one hand is, what may best be designated, the school ideal, and on the other, is the ideal of the nursery. The first is seen in the infant schools previous to the rise of the kindergarten, and the latter to a large extent is exemplified in the Pestalozzi-Froebel Haus of Berlin. The first ideal maintains that the child must thus early be trained in formal culture to prepare him for the later work of the school and eventually for social functioning in the intellectual, moral and industrial world. It controls the mind of the child *ab extra*, without regard to his native interests. The nursery ideal makes its chief aim the development of the child in all his inherent interests and instincts through free and spontaneous activity.

It is now generally accepted that the spontaneous activities of children at this period have an incalculable significance for their normal, and healthy development. Children from the age of three to six are too young for the systematic discipline of routine school life. The function of education at this period must be, whether in the home or the kindergarten, to foster and gradually unfold, through wise stimulation, those instinctive activities and interests which make for the complete development of the individual at this stage, with the maximum of freedom and the minimum of necessary disciplinary control, consonant with obedience. To give this in a more concrete way, the kindergarten must permit the children to become healthy animals first of all. Froebel believed that it must be the function of the kindergarten to emphasize the child's free activities and instincts. In outlining his first kindergarten he points to the fact that when the infants come from the home they have already attained certain habits and directions for their activities, and these the teacher has no right to overlook. At this stage the teacher must recognize these powers of the child already present and must develop them still further.

The activities of infants which Froebel has made the basis of his pedagogy are drawn directly from his inductions from a study of children. He carefully observed the activities, emotions, growth, and expressions of children so far as he had opportunity. But after all is said in his praise as a student of childhood, his knowledge was the result of chance observations and lacked definiteness, and detail, and was burdened and obscured by his interpretation in the light of his own adult conceptions of symbolism and philosophy. Yet it is just this false monstrosity of the Froebelian child that the kindergartners have set themselves up to educate with the symbolism of the kindergarten.

It may be acknowledged that we are still in gross ignorance of the normal development of children at this period of life. The period of early infancy has been carefully studied by Preyer, Darwin and many others, and the periods subsequent to the kindergarten have been more or less sufficiently studied, but the children from three to six have never been carefully observed. However, there is some data from which we are able to project inductively the basis for the pedagogy of the kindergarten. This theory must naturally find its basis in a study of the instinctive activities and interests which arise so powerfully at this period of infant life. For the manner and succession in which these spontaneous activities manifest themselves, we must refer the reader to what meager literature there exists. We can only record these activities and interests and point out their value for development.

I. Language, Gesture and Expression.

From his study, Dr. Tracy concludes that the capacity for the acquisition of language is inherited, but its perfection depends on use and exercise. It begins early in the language of gestures and vocal cries. The infant commences to use words in the third half year of life, and during the years from three to six very rapid progress is made in acquiring and using words and simple sentences. Children take a supreme delight in exercising their newly won power of expressing their ideas; they are fond of talking constantly with their parents, teachers, and other friendly adults, and playmates. An important factor is the habit many children have of conversing with toys, dolls, and animals with which they play.

All writers on this early period have emphasized the value of this instinct for acquiring languages and words. The kindergarten must furnish training and exercise for this instinct. It is very necessary that all the children have an opportunity to express themselves in their plays, in repeating stories, and in general conversation on topics in which they are vitally interested.

There seems to be no good reason why at this period when the children are so capable of mastering new words, they should not be given foreign languages as well as their own. The ease with which young children, who have been given the opportunity, have acquired German and French as well as English, shows that it is very possible. It would lighten the later acquisition of these languages enormously. Some have objected that this would result only in the children confusing the different tongues and in the end attaining no proficiency in any; they prefer that the children learn their mother tongue as perfectly as possible, and this cannot be done when confused with foreign languages. But this objection is not entirely valid. Children at this age are not capable of mastering any language, even their mother-tongue, very perfectly. Almost every one can point to some child who has acquired two tongues in a way as perfect as other children acquire one at this early age. The writer knows a number of children below six who speak English, French, and German, equally well, and they are not behind other children in the use of their mother-tongue. Moreover, these children are from quite normal parentage, not above the average in intelligence.[1]

II. Curiosity, or the Instinct for Knowledge.

So much attention has been given to the symbolical plays of infants in the kindergarten that the necessity for the observation of the natural and other objects of the environment of the child has been too largely overlooked. The inquisitiveness of young children has marked this stage as *par excellence*, the "questioning age." Infants from three to six are intensely interested in all the objects about them, and they do not by any means spend their entire time in play; they have their periods of serious practical interest in discovering new facts.

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[1] *Vide*, also German Kindergarten, Minneapolis, Minn.

The distructiveness of infants is in part an expression of this instinctive search for knowledge.

The cultivation of this instinctive curiosity to see, hear, handle, and to secure the maximum number of sensations from any and every object, is of the most vital importance. Without this primary interest the play instincts would be almost entirely lacking in stimulus, if, indeed, it could be aroused at all. This inquisitiveness is naturally the vital factor in later scientific interest. Spencer says: "Whoever has watched, with any discernment, the wide-eyed gaze of the infant at surrounding objects knows very well that education does begin thus early, whether we intend it or not; and that these fingerings and suckings of everything it can lay hold of, these open-mouthed listenings to every sound are the first steps in the series which ends in the discovery of unseen planets, etc., . . . This activity of the faculties from the very first being spontaneous and inevitable, the question is, whether we shall supply in due variety, the materials on which they may exercise themselves; and to the question so put, none but an affirmative answer can be given.[1] Professor Morgan says in this connection: "Herein, then, lies the utility of the restlessness, the exuberant activity, the varied playfulness, the prying curiosity, the inquisitiveness, the vigorous and healthy experimentalism of the young. These afford the raw material upon which intelligence exercises its power of selection. Observers of human life have not failed to contrast this youthful expansiveness ready to try all, dare all, and to do all, with the narrower and more restricted, if more concentrated efforts of those in whom the stern lessons of experience have checked so much that is picturesquely impossible. And this exuberant expansiveness of the young is a biological and psychological fact of profound significance."[2]

III. The Play Instincts.

Readers of kindergarten literature are well aware of the profound importance of play for the education of the young. The kindergarten has always based its philosophy upon this fact. It is not essential, therefore, to discuss its general utility, but only to point out its biological function and those forms of play which are dominant at this period of infancy.

Three views have been current regarding the biological function of play. Schiller, followed by Spencer, explain play as a result of a superabundance of nervous energy. To furnish this overplus of energy a means of escape, the young go through various sportive activities which resemble the serious activities of life. The impulse is awakened into action by the tendency to imitate the activities observed. Directly opposed to this hypothesis is one not so widespread. The explanation it offers is that play affords recreation and the restoration of depleted energies. When the mind is nigh exhaustion relief may be obtained by indulgence in active plays which ease the nervous tension. Professor Groos offers a further theory. He finds play activities to be instinctive; they are anticipatory of the serious activities of the adult life. "The animals do not play because they are young, but they have their youth because they must play." (Play of Animals, p. 76.) Without this instinct for play "the adult animal would be poorly equipped for the tasks of his life. He would have less than the requisite amount of practice in running and leaping, in springing on his prey, in seizing and strangling his victim, in fleeing his enemies, in fighting his opponents." *Ibid.*

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[1] Education, p. 282.

[2] Habit and Instinct, p. 163.

A. Physiological or Motor Plays. The purely motor activities of infants are the most primitive form of play, and are based upon the physical needs of the child. The movements that appear in the period of later infancy are creeping, running, marching, walking, dancing, jumping, hopping, skipping, climbing, swinging, throwing, kicking, clapping, rolling, flying, etc. (For a complete list, *vide* A Study of the Kindergarten Problem, p. 42.)

It may be of interest to give a table from the returns to the syllabus of President G. Stanley Hall. The singular uniformity of opinion regarding the physical adaptedness of these motions is noteworthy.

	Harder.	Easier.	Earlier.	Later.	Liked.	Not Liked
Clapping,	0	28	22	0	16	0
Rolling Ball,	1	24	21	0	13	0
Running,	3	21	18	2	8	0
Flying,	11	13	10	9	9	0
Marching,	16	7	6	9	7	0
Skipping,	19	4	3	12	9	1
Finger Movements,	20	0	0	11	4	2

B. Hunting and Wandering Instincts. These are well known to all observers of children at this early age, and they must have some value and significance for development. It is not essential that they be indulged to excess or that they be allowed a savage expression, but hunting and hiding, the chasing of other children, insects, and animals, and also the impulse to wander about on excursions ought to be indulged in a harmless way. The excursions into the country where it is possible for the little ones to follow insects, and animals, and where they may indulge in pursuit and collecting will be very beneficial, as well as the milder games of hide-and-seek, and all those make-believe games of savagery and hunting.

C. Imitative Plays. Without committing assent to any of the psychological explanations of imitative processes, it will be readily agreed by all that there is certainly no type of play activities so indispensable for mental evolution in the race or individual. Groos says, "Die Nachahmung ist der Vermittlerin zwischen Instinct und Vernunfthandlung." (Spiele der Menschen, p. 360.) Imitation, however defined, is the cause of many acts which would otherwise have to be instinctive, and it is the means by which many activities with strong instinctive basis are set into motion. It is this capacity in human nature that makes for intelligence.

We are most concerned with imitation as the basis for those dramatic games and plays which, as we have seen, give rise to the kindergarten symbolism. It is therefore of prime importance to know beyond dispute just what objects are most imitated by children of this age, and what characteristics of these objects have most attraction for the infant mind.

Miss Frear has shown that during the second year the child breaks away from a slavish repetition of the actual copy to make his own adaptations. He begins to imitate the idea of the object as it suits his purpose and environment. At the beginning of the third year the imitation of the actual thing, or copy, directly, has fallen to about 30% of the total imitative acts, and the imitation of the idea has risen in the same time to nearly 70%. Professor Baldwin draws attention to these adaptations made by children in their dramatic games, and points to them as the very essence of originality.

Children from 1 to 12 imitate the adult human being, other children, and also animals. The imitation of other children and animals never rises above 15% of the whole at any age; the imitations of adult human beings never falls below 80%, except slightly, for a short time about the 7th year. These results are the best scientific data available. They may be trusted to establish in a general way the conclusion that the chief thing for imitation is the imitation of the motor activities, and the most frequent copy which the child selects is the adult human being. This must have an important bearing in selecting games and in directing the activities of infants during the kindergarten age; it negatives many of the absurd imitative acts which the teacher dictates to the children, where they copy animals and inanimate objects in a perfunctory manner.

D. Constructive Plays. The building, or constructive instinct, is one of the most spontaneous of all the play activities of young children at this period of life. Groos has said that it is "a particular expression of the general delight in causation." It was for the satisfaction of this instinctive play that Froebel elaborated his gifts, and their value must be measured wholly upon their suitability to meet this need. The duty assumed by the kindergarten is to furnish the proper materials with which the child can express his thought in a constructive way. These materials must not be selected to harmonize with some system of philosophical speculation; they are not to be symbols of an ontological theory, nor the outcome of a logical sequence at once artificial and abstract, nor are they to be designed to instruct the child in any special qualities, as form, size, number, or density, nor to construct involved geometrical figures. In so far as their pedagogical value is concerned, their first duty must be to minister to the instinctive impulse of the child to create something in which he is interested. Judged by this standard, the gifts are very inadequate; they are too small in size, and too limited in the number of pieces.

E. Agricultural Plays. The interest all normal children take in primitive agriculture is too well known to require extended treatment. All kindergartners find digging in the sand and earth and the handling of clay a pursuit which affords children constant and unclouded pleasure. Froebel recognized gardening as the one indispensable part of the kindergarten. Planting of seeds, observation of growth in shoots, stalks, buds and fruit, the gathering and storing of harvest are the veritable "mystery of mysteries" to the childish mind. Gardening affords exercise to the body in a manner least fatiguing and most instructive and pleasurable. It gives mental images and conceptions which open for the future all the beauties of literature. Anthropologists agree that these agricultural activities have been a momentous factor in producing the higher development of the race. May it not be that this interest of the infant nourishes some unseen roots of his nature of the widest importance?

F. Improvised Plays. There seems to be a type of plays in which most children engage which cannot be directly connected with any of those hitherto discussed. They may have some relation to the imitative plays where it is the "idea" rather than the direct activity that is reproduced by the child, and at the same time they are connected with the petting and care of animals. The doll plays may be the best example. From a study of dolls made by President Hall it would appear that while related to imitation, along with this it "must include some elements of the widespread animism, if not fetishism of children and savages."

The authors say this is not merely a girl's play. "That boys are naturally fond of dolls and should play with dolls as well as girls, there is abundant indication." In closing this instructive paper the question is judiciously asked: "Would not dolls and their furnishings be among the best things to make in manual training schools; and why are dolls, which represent the most original and spontaneous expression of the play instinct, so commonly excluded from the kindergarten where they could aid in teaching almost anything?" The doll play is freely used in the Pestalozzi-Froebel Haus, and is creeping into the best kindergartens in America. The use of the doll to represent the baby would be infinitely more psychological than the cube or many of the impossible and absurd symbols thus employed.

IV. Artistic and Æsthetic Interests.

The artistic awakenings of children begin to make themselves active in a remarkable way during this kindergarten age. These interests center in drawing, painting, music, looking at pictures, clay-modeling, paper-cutting, and many other simple forms of childish activity which are set off more or less by the imitative impulse. The chief thing noticeable in all these well-known performances is that they are as yet rather a means of expressing thought on the part of the individual, and not directly an attempt to produce the beautiful. We are still quite ignorant regarding the order in which these phenomena arise in the life of infants, and we cannot tell definitely under what conditions their development will be facilitated, and give rise to the higher habits of taste and æsthetic sentiments which are evolved out of them.

V. Social Instincts.

The kindergarten has always recognized the need that exists in every normal child for association with his fellows. Comenius recommends its worth in arousing and sharpening the intellect. Froebel early recognized its deeper significance for the moral nurture. Investigations demonstrate that the desire for social intercourse is inborn in the child and appears early.

It has been asserted by some students of the kindergarten that "the play activities of children at this stage are almost wholly individualistic, their interests are individualistic, and not until a much later period of their development should we consistently look for that unity of purpose and action of which the circle is the symbol." (Burk: Study of the Kindergarten Problem, p. 37.) Dr. Luther Gulick arrived at the same conclusion that the "plays of early childhood are individualistic, non-competitive, and for the accomplishment and observation of objective results." (Pop. Sc. Mo., 98.)

Against this conclusion Miss Sisson found in her study that when wholly free, kindergarten children do form into groups to co-operate in play under the leadership of some child who, stronger than the others, naturally assumed this role. The weight of authority from other sources and common observation seems to warrant the deduction that children do seek at this age, the companionship of their equals to play, and give vent to social feelings. It is doubtless a fact that many of the plays of the early days of infancy are mainly individualistic, but these are likely to diminish rapidly from the time the child is able to walk, to talk and to take a new interest in what others are doing. By the time the child is four or five he is ready to enter many plays of co-operation with a few, at least, of his fellows; such plays as horse, bear, train, doctor, etc. It is quite out of question for thirty or forty, or even fifteen or twenty to take part in a spontaneous game such as the kindergarten circle calls for. The most of the kindergarten games require only a limited number of children to play the chief parts while the others act as spectators, or stand about as wooden blocks representing "trees," or such like artificial things; these games are false to the real life of children, and have no justification whatever. The truth is, most probably, that only two or three, or at most five infants can profitably and naturally play together at this age with any degree of spontaneity and naïvete.

VI. Acquisition and Ownership.

It has been recognized by students of childhood and psychologists that the collecting passion is an early form of the instinct of property and possession. Dr. Kline, who has studied this activity, decided that "property getting in childhood is instinctive, an activity not to be suppressed or thwarted." The nature of the objects collected depends almost wholly upon its environment. "The intrinsic value of the article plays no role, but collect it will, and must." Froebel noticed that infants, as soon as they can walk, begin to gather pebbles, bits of paper, pieces of board, twigs, straws, and other articles. He recommended this as an activity to be encouraged, not so much for its value in fixing habits of acquisition, but since it leads to a later scientific interest and observation.

VII. The Number Interest.

There are few questions in infant education that have received so great attention as that of the time and manner of introducing the child to number work. We are interested here in knowing at what age the majority of children begin to count over the number series, and show an interest in the primitive arithmetical operations. From an inductive study of this problem Professor Phillips concludes that number comes from the idea of a series, and is not primarily dependent on objects; the series idea is aroused by the succession of sensations either of touch, or from the circulation, breathing, or rhythmic sounds, clock strokes, etc. "That this series idea is the first step, and that it becomes quite abstract, will appear evident when all the facts are co-ordinated. Long before there is any conscious idea of number, children delight in reproducing or following a series of any kind."

"The early period at which children learn to count is very significant. They learn to name the series and follow it before they learn letters, to read or to write. Out of 1,100 persons, 90% are sure they learned to count first." From this we may infer that the kindergarten has a good opportunity of developing the interest in numbers which arises thus early.

VIII. Story Interest.

The children's love of stories has been a theme of importance from the time of Plato. Stories enrich the imagination and the feelings, and emancipate them from the domination of the senses. The problem of vital import for the kindergarten is no longer of the value of stories in general, but of the practical use of stories which will be suitable to the mental level of the infant. We are quite in the dark regarding the kind of stories fitted for each particular age.

Taking these as the representative activities which are to be observed in all normal children of kindergarten age, we have a basis for an inductive pedagogical theory for the kindergarten. All these activities play a greater or less part in the expression and development of the infant, and if they are encouraged, it leads to the evolution of the individual upward to the fuller consciousness and the higher stages of life. By allowing these instinctive interests their normal growth we are giving nature that chance to produce under the proper environment the complete adult product for which she has endowed the individual with all these spontaneous awakenings of the mental and psychic nature. We are conforming our training to the natural unfolding of the tender plants within the kindergarten. It must be said that these activities are not to be regarded as so many separate and distinct expressions of the young organism, but they are interwoven in the most complicated manner in the everyday life of the child. We do not know that there is any special order in which one follows the other or evolves from it, and we are quite ignorant of their individul values. But forming, as they do, the typical expressions of the whole complex organism at this stage we have every right to analyze them out and make them the basis of a pedagogical theory.

The advantage of assuming that these are the natural highways for the education of the infant is that we have a foundation that is true to the inherent interests of the child himself. The aim is therefore found in the child, and not in some standard we set up for him. We are not imposing *ab extra* actions and interests that are foreign to his life, and which are only logical to the adult consciousness, but those which are the outcome of the inherited accumulation of the ancestral predispositions, and have all the momentum of the race behind them. With a firm confidence in the inherited racial tendencies we must also recognize that the child is capable of much modification by the environment in which he displays these native tendencies. His development is the result, on the one hand, of his own spontaneous expressions, and on the other of the environment which tends, naturally, to inhibit some and to intensify others of these activities.

If the fundamental thesis that the child has within himself all the complex possibilities for his complete development be accepted, and the expression of these spontaneous activities is dependent on the environment, then the question, *par excellence*, for the kindergarten is the question of what will constitute the best environment. The basal contention of Rousseau Pestalozzi, and Froebel is summed up in that they believed every child will develop, as a tree, by the very push up of nature if he is given the proper environment for the expression of his outpouring energies. It has always been a matter of note for centuries that it is these years of kindergarten life when the child is most active in getting his first orientation in the outside world of nature and society. This is the period in which all those distinctively human activities, which have made for the advancement of the race of mankind over the animals, show themselves most powerfully.

The first fundamental requirement which the healthy development of the childish organism makes upon its environment is that it affords him adequate opportunity for play in the open air. Upon no class in modern civilization does the increasing movement toward density of urban life fall with such blighting effect as upon the young. Considered first as a matter of inheritance, or predisposition, the infant, and, even more, the child, demands the advantages of more or less space upon mother earth. For centuries of time, in which the human race has been perfecting, it has dwelt in the open air, under the open sky, with little protection and with endless possibilities on every side. We have every right to accept, within reasonable limitations, that the child repeats the stages of the development of the race in its fundamental instincts and interests. If, therefore, the race has found its natural evolution entirely apart from the urban conditions, which are the product of very recent centuries, it must, likewise, be true that the infancy of the individual is naturally predisposed to flourish most advantageously where there is abundant opportunity for free, undictated play in the open air under the light and sunshine of heaven.

The physiological needs of the growing organism especially point to the baneful effects of city life upon young children. None of the activities of later infancy are more profoundly beneficial than the simple actions of running, walking, dancing, jumping, climbing, swimming, throwing the ball and all such simple movements of the fundamental muscles which begin to function at this time of life. These movements bring into activity the trunk muscles which, next to the brain itself, are growing rapidly, they fill the lungs with pure, fresh air, stimulate the heart, and thus set into rapid motion the circulation of the blood. The increased nutrition which results from this acceleration, day by day, has an incalculable value in building up the infant body, and prepares for those more subtle developments which are possible only when a strong foundation has been laid. It is these activities which in this way prepare the organism against the infantile diseases, and generally prepare for the robust blossoming of a full and complete intellectual life. It is a singular fact that this most Froebelian of all the teaching of the founder of the kindergarten has received least attention. The enormous cultivation of the virtues of the gifts and the occult symbolism of the games has resulted in making the kindergarten sedentary, or, at least, has confined it within doors, and thus restricted the spontaneous activities of the children in the open air. This tendency has certainly no justification whatever, either in the teachings or the practice of Froebel, and much less in the hygienic requirements of the child.

It is a well known fact that Froebel constantly played with his children in the open air. Frau Marenholz-Buelow and many others have borne witness to this; he himself asserted it, and the great Diesterweg found him thus playing with the children upon the hills not far from Liebenstein. It is still customary for the kindergarten at Blankenburg to pass through the streets of the village to the old "Spiel Platz," which was the favorite spot for Froebel and his children to gather for their games and sports.

The importance of developing the open air games and plays cannot be too strongly urged. Froebel instituted the kindergarten in the country village where it was natural for the children to live in the open air. He never conceived that what he regarded as the most fundamental condition of the environment should be almost totally ignored. The fetish worship of the gifts has been most largely to blame for this mistake. It cannot be pleaded that the practical exigencies of city life have been the entire factor in the total neglect of out-door plays, for even in the country towns and villages Froebel's example has not been followed, nor his insistent admonitions heeded. There can be no reason whatever why a large number of the games and plays should not take place in the public parks. Roof gardens might be within reach of the energetic, or as President Hall has suggested, "Next to out of doors, the kindergarten, at least in winter, might be on the top floor under a roof wide open to light, where some of the health provisions of hospitals are seen." (Forum, January, 1900.)

The second fundamental condition which the kindergarten must present for the activities of childhood is that he have unlimited opportunity for observation and contact with the objective world. An effort must be made, as Froebel shows by excursions, to afford children an enlarged environment of all such natural and artificial objects as will attract their attention and interest. The kindergarten age is above all the ripe time for sense development; it is the period for receiving lasting images through eye, ear, muscles, and other senses. "Take your little children by the hand," advises Froebel, "go with them into Nature as into the house of God. Allow the wee one to stroke the good cow's forehead, and run about among the fowl, and play at the edge of the wood. Make companions for your boys and girls of the trees and the banks and the pasture land." (Education of Man, p. 184.)

The demand for perception of natural objects plays a part in all the writings of Froebel as remarkable as the disregard which is paid to it by the kindergartners of the present day. It is the more phenomenal that Froebel, living in the country, thought it so necessary emphatically to reiterate the need of sensuous contact with natural things. This fact has been insufficiently recognized in the kindergartens of the larger cities where more than anywhere the children are total strangers to the most commonplace objects. From the "Contents of Children's Minds on Entering School" we take these examples of childish ignorance. Of the bee-hive 80% were ignorant; crow, 77%; squirrel, 63%; sheep, 54%; frog, 50%; growing wheat, 92.5%; growing rose, 54%; island, 87.5%; woods, 53.5%; river, 48%; hill, 28%; plough, 64%; spade, 62%; hoe, 61%.

The importance of these sense images becomes more apparent when we recall that they are the basis at once for all the future knowledge of the child, and at the present stage of development they are the indispensable stimuli for the plays in which the child is likely to indulge. Among the spontaneous plays of the infant, by our analysis, we must place the imitative plays as the most valuable; for through them the child prepares for the future activities of the adult, and by them he enters into and understands the adult life, and also exercises his own originality. It is indispensable that the child have direct perceptions of the copies he is to imitate. One of the most dangerous errors of the kindergarten springs from the oversight of this simple fact that the child can alone imitate intelligently, those activities of which he has a vivid mental image. The common practice of teaching the children to imitate the actions of animals, and also the primitive human activities, which he has never observed for himself, cannot be too strongly condemned. For example, the child is taught to imitate the pigeon, or the sheep, or the bird nestling over its young, or the blacksmith, or Hiawatha, when he has no more idea of these and their characteristics than of the categories of Aristotle.

The imitative plays, and these are the symbolic plays in the only true sense, are dependent on the proper sensuous stimulus; without this stimulus from the senses there can be no reflex arc so far as children of an early age are concerned, and consequently there is no reaction imitatively, and thus no spontaneous, naïve play. If the kindergarten would encourage imitative plays, it must bring the child into direct contact with the objects of nature which offer the stimuli, and also the primitive activities of mankind.

Furthermore, these must all be observed in their natural environment, as far as possible. It is not sufficient that the child see toy sheep four inches high, or the picture of the bird brooding over its young; object lessons of this kind are dead and lack the life characteristics which make them interesting to children. Froebel said, "the boys should see the animals and the plants in their life, as it were; they should observe them in their natural abodes, some basking in the sun and drinking in light and warmth, others hiding in darkness and shade, seeking coolness and moisture." (Education of Man, p. 311.)

It is just these life characteristics, these common movements and uses of animals and objects which attract children most, and form the center of vital interest for the young observer. The perception and the interest in the static qualities of color, form, density, parts and structures are very secondary and do not enter the child's concept until later. The failure to recognize this fact leads the advocates of object lessons and nature study into error. They have proceeded to give the child those details and features which to them are non-essential and have no vital claim to his attention and memory. He wants to see and know how the animal moves, eats, and what his use may be.

Binet studied his two children, one from 4 to 5 and the other

2½ to 3½, to discover how they perceived and represented the objects with which they were familiar. He reports, "We examined the responses of the two little girls. It is almost never a question of the visible aspect of the objects. The responses bear almost entirely upon the uses of the object. Bread is for eating; a knife is for cutting; a chair is for sitting upon; a table is for putting the lamps or the books on. This mode of representation is never the effect of caprice or fantasy, since one finds it in the interrogations separated by an interval of over seven months and it is common to both children. This shows us with what eyes these two children look upon the external world; they are utilitarian above everything; one speaks to them of bread, they are not arrested by the form or the color; bread gives them especially the memory image of something which they carry to the mouth and eat; bread is for eating." He concludes that as a general rule "the child is invariably attentive to the usages of objects." Professor Earle Barnes has studied this question in older children and reaches substantially the same conclusion. (Binet: Perceptions d' Enfants, Revue Philosophique, December, 1890.)

It is a striking fact in human experience, that the advocates of any truth may, in practice, be exemplifying the corresponding error. The Protestant revival could assert the freedom of conscience and yet result in the persecution of its opponents; the Puritans may flee oppression in one land to become its instruments in another; the political doctrines of one party may lead to a government upon opposite principles. So it may be in education; humanism in Italy may become a worse scholasticism in Germany; the spontaneity of Froebel may be in actual practice the domination of the adult. At all events, this principle, upon which the kindergarten theory was so strongly entrenched, is almost totally disregarded in real kindergarten practice. In the ordinary kindergarten, there is first of all, a programme for the week, day, and season. This is formulated by the adult, adapted to adult needs, and grows out of the adult conceptions of order and connection. The entire work of the day is directed by the standard set by the adult. The kindergartner regulates the length of time for this play and for that; she selects the order of the daily occupations, she controls the movements of the children down to the minutest details, she even goes so far to the absurdity of a fantastical and puerile regulation of the manner in which the boxes containing the gift building blocks must be handled. First, the box must be placed directly and squarely before the child, upon the lines of the table; then it is reversed, finally by some stereotyped juggling the lid is withdrawn, and in breathless expectancy and wonder, the box is slowly lifted, and behold! the amazing spectacle of the cube in all its profundity of meaning lies open to the infant gaze. This minute regulation to the most trivial details, for the sake of symbolism, is termed the spontaneity of free play.

Contrast with this state of affairs, if you will, the daily round of a well regulated nursery. The child is not bound in any way by an imposed programme; now it is this play and now it is that. He is not oppressed with a sense of unfitness; the seasons are not the regulator of his interests; he may play farmer in winter as well as in summer; he may be a builder at any season; he may brood over his nestlings with as much unction in the fall as in the spring. His interests tell him when it is time to take up some new activity, and tell him what it shall be. There are no absurd and trite orders in which he shall take up his blocks, or put them away. His own growing sense will direct him, quite regardless of the marvellous truth of the unity, diversity and connection.

Contrast, too, the manner of the free spontaneous play of the superior nursery with the artificiality and unnaturalness of the kindergarten play. In the one case the interest of the children select the game, the appropriate actions, the order, the essential movements and the conclusions. It is graceful, marked by sustained attention, and exhibits that one quality which more than any other is characteristic of all true, pure childish make-believe, naïveté, the artlessness of unconscious dramatic instinct. In the kindergarten the plays are mechanical, and forced; they exhibit little real spontaneity, little of childlike unconsciousness, nothing of naïveté. The play is usually suggested in the first instance by the kindergartner, and each actor is rehearsed by constant dictation into his role, while the majority of the children remain as mere spectators, or as "wooden posts" or "trees" or some such like object which they would never dream of imitating, and all the while anxious to be chosen to play a part before the others that they may also have a turn to "show off."

Moreover the very principles of the kindergarten are against all this incessant domination of the infant's interests by those of the adult, and show that it is not educative but mechanizing. These regulations of each successive movement deprives the children of initiative, and robs him of the opportunity for originality. The kindergarten sets the model and the child follows the copy, as best he can, often succeeding only after repeated aid from the directress. If, however, we inquire why all this care on the part of the trainer, we are informed that we cannot understand; the child must play, and the kindergarten exists to teach him to play. No greater error could flourish. The truth is that children could rather teach the adult how to play. They have always played, and they will always play, so long as materials and freedom are granted to them. The plays of the kindergarten are not play but intricate gymnastics. It is as impossible to teach the children to play as it is to teach a young robin when and where to build his nest. The first great requisite in both these cases is to afford natural activity and interest a chance to find their expression, and to furnish the materials necessary for this end. Without doubt children will find the appropriate mode of action. "Therefore, education in instruction and training, originally and in its first principles, should necessarily be *passive*, *following* (only guarding and protecting) *not prescriptive*, *categorical*, *interfering*." (Italics Froebel's.)

Thus far it would appear that the mother and kindergartners have little part in the environmental forces acting upon the infant organism. From the last section the reader may assume that this vital factor is to be rashly neglected; but the purpose was to bring out in full relief the fundamental proposition that the adult must follow the development of the infant and not restrain it by the imposition of *ab extra* standards. The relation of the adult to the infant is all important, but it is so because it is the most subtle and powerful influence which makes its impress upon the child's life at this period of extreme plasticity. The relation of the mother, for the kindergartner only temporarily stand in *loco matris*, may be threefold: it is a relation of love and sympathy, of intellectual sympathy in the mental interests of the child, and lastly it is a governmental relation. With this comes also the primary duty of providing food, clothing and home life.

It is an astonishing fact that some of the fundamental facts of the widest biological and ethical import are comparatively overlooked by pedagogics. We are ready to urge the need of social orientation to discuss the necessity of discipline and its desired results, but few lines have been devoted to the vital fact that no infant can flourish normally who has not that emotional *rapport* with his parents, which we call love. The extreme difficulty of definite knowledge of the childish emotions at this early age may account for this neglect; but when we consider the close relationship between child and mother, on the physical and psychical sides, we may be sure of this as a growing factor in the development of character. When we recall that in later years, and especially in the storms and stresses of adolescence, the ethical power of filial affection is frequently the dominant motive against evil, then we begin to glimpse the immense strength of this emotional factor.

That love is an essential need of the child we can judge from the fact that children in infant homes, although under the same regimen of diet and discipline as in well-ordered homes, do not make the substantial progress of home-bred children. Oppenheim says: "Even in infancy one can plainly notice this fact. These little creatures look, act, and really are far otherwise than the ordinary baby in good surroundings. Their want of mental, as well as physical activity, is so plainly apparent as to be visible even to non-professional observers. From such a source comes the remark that 'institutional babies are tolerably lethargic.' They are lethargic because their vitality has been sapped away, and one might, with equal truth, say that institutional babies are tolerably withered. Even more striking is a fact that can be vouched for by any physician who has had experience in hospital wards for babies. Such patients languish in institutions although their food and care are fairly good. . . . The reason is not hard to find out. The gist of the matter is that the care of a baby is not meant to be arranged on a wholesale plan. He needs personal attention, and without it his body withers." (Development of the Child, p. 246.)

Associated with and second only in importance to this emotional *rapport* between mother and child must come intellectual sympathy. We have already seen for the development of the mental life of the child freedom of expression is a most imperative necessity. The relation of the adult to this development must be that of sympathetic appreciation; from time to time this appreciation or intellectual sympathy will pass over into wise suggestion, and only in rare cases of positive need will active discipline and command intervene. The possibilities of utilizing the intellectual sympathy of the adult to encourage the young is well stated by Spencer. "What can be more manifest than the desire of children for intellectual sympathy? Mark how the infant on your knee thrusts into your face the toy it holds that you too may look at it. See when it makes a creak with its wet finger on the table how it turns and looks at you; does it again, and again looks at you; thus saying as clearly as it can, 'Hear this new sound.' Watch how the elder children come into the room exclaiming, 'Mamma, see what a curious thing,' 'Mamma, look at this,' 'Mamma, look at that:' and would continue the habit did not the silly mamma tell them not to tease her. Observe how, when out with the nurse maid, each little one runs up to her with the new flower it has gathered, to show her how pretty it is, and to get her also to say it is pretty."

Among the numerous other conditions which go to make up the ideal environment for the most complete life of the kindergarten infant must be those that minister to the primary physical needs. The kindergarten does a most positive harm when it does not afford these infants every opportunity for frequent nourishment and for sleep. These are absolutely essential for health, and still the kindergarten keeps these children for hours in active exertion with no chance whatever for recuperation and food. There are other requisites also which are important but cannot be treated at present.

From the study of the human organism at this period of development in relation to its environment to my personal judgment but one conclusion is apparently inevitable; the kindergarten must furnish the public nursery for children at this age. The total disappearance of gardens from connection with homes, the ever increasing tendency to greater and greater density of population, the consequent diminution and disappearance of lawns, and play-grounds, the diminished facilities for nurseries owing to crowded tenements and the expense of spacious rooms, the inability of most parents to furnish the best nursery conditions, all lead to this conclusion that the kindergarten must act as the public nursery. Moreover, the social needs of the child himself, and the demands that his introduction to the larger life of the world be at first wholly under the direction of the mother, or mother-spirit, give us the same result; the common nursery, or kindergarten, for children from two or three to six, must compensate for the loss of the private nursery which the present social conditions have rendered impractical. This mothers' club house must furnish means for all kinds of plays in the open air, and facilities for gardening. It must be equipped with a building amply furnished as a nursery; it must afford opportunity for eating, sleeping and cleanliness. It must supply rooms for the plays when the weather is unfavorable, and where the children and mother can play together when they wish. Such an institution would give the best opportunity for training nurses and kindergartners, and also young mothers, and this was the very ideal of Froebel, for which he strove in his later days.

It has appeared advisable to treat the philosophical basis of the kindergarten more in detail and to leave the problems of technique, practice, and hygiene for a later discussion. A brief outline of some of these questions may be set down.

No consensus of opinion has been reached regarding the stories which are suitable for kindergarten children. An effort must be made to know more definitely what are the stories best adapted for this age and what characteristics are most demanded by the children themselves. Myths, fairy tales, mother goose rhymes, fables and folk-lore should all be drawn upon. Emphasis has lately been thrown upon the true stories from everyday life, also special experiences as parties, excursions, etc., simple descriptions of objects and events which appeal to the imagination. Comenius strongly advocated humorous stories for this period; certainly this is a field much neglected in kindergarten. Uncle Remus, Humpty Dumpty, and Brownie stories should find a place.

The stories for kindergarten infants require to be extremely simple; they must train the weak imagination and mind to associate details and to knit up the various parts into a whole. Words expressive of action, movement and indispensable characteristics. Names come next in importance, appearances of objects, place of action, and time, have all a part to play, but are not to be too prominent. There are some things which the child does not demand, and in these he differs from the adult. Sequence, order, likelihood, proportionate development and balance are quite indifferent to him. The stories told by children themselves at this age do not exhibit much if any feeling or æsthetic details. The proverbial moral appendage which adults drag in for children is quite absurd from the child's standpoint.

Stories should lend themselves to the development of language and expression. They should be capable of dramatization. Parts also should be easily drawn and the whole should be readily held in mind so that the child can retell it. This whole matter of stories presents a wide field of investigation for practical kindergartners.

It is high time the orthodox Froebelian drawing were abandoned. The temptation to have the children draw regular figures or geometrical figures can only be for the purpose of showing off. Childhood, like greatness, is never exact. The child should choose his own subject in drawing as in any other mode of expression. Usually he begins with the figure of a man. At intervals slight suggestions for improvement can be made; but they should always remain merely suggestions. Progress and development will come of themselves. An attempt will be made later to develop from the actual drawings of children the subjects and laws of progress in the normal child.

It is of the greatest value to know what departures into new lines have been made in the lines of play materials and what the result has been. This subject ought to be treated in detail. Among the more common of the new materials, are peg boards, tiles, stringing buttons, painting, use of chalk and colored crayons, plaiting daisies and leaves into wreaths, clay, soap bubbles, straw weaving, cranberry stringing, and sand. Dolls and toys of various kinds are finding a place slowly by the side of the older materials. In California more out-door games have been introduced; somersaults, wrestling, rolling hoops, climbing, swinging, see-saw, etc. These are of great value in strengthening and developing the muscles. Of the dramatic games there is a wide field. The children, it seems to me, must here be left to choose for themselves; the plays should be largely performed by twos or threes, and never in the crowd. The environment must be a determining factor. But among the more universal are doll plays, washing dishes, clothes, ironing, sweeping, etc.

Music, other æsthetic occupations and nature studies will also suggest many problems for discussion later.

The questions of hygiene are the most vital to the kindergarten and have been most neglected. The kindergarten receives the children at a critical for stage developmental neuroses and hereditary lesions, and general susceptibility to disease. The organism is plastic above all else.

Building equipment, lighting, heating, ventilation, and cleaning are all of prime importance. The absence of dust must be imperative where children are playing so much. Personal cleanliness demands constant vigilance. Enough care is not taken to avoid straining of the muscles of the eye; in fact, too much use of the eyes is forced by the work. Nervousness from the continued excitement of the crowd is too great for many little ones; almost every one acquainted with kindergartens can point to some child who has had to be withdrawn or is laboring under nervousness from the kindergarten. All the causes of the nerve strain must be inquired into. Finally, more attention must be given by kindergartners to the law of the development from fundamental to accessory in the nervous and muscular system. In spite of all that has been said, the work is frequently too fine and too taxing to certain muscles.

Cordial acknowledgment is due to President G. Stanley Hall for suggesting the kindergarten problem as a rich field of study, and for his many valuable thoughts and constant interest which has been an inspiration throughout. Thanks are due also to Dr. Wm. H. Burnham for many kindly criticisms and suggestions, and to Mr. Louis N. Wilson by whose assistance the necessary literature on the kindergarten has been obtained.

SELECTED REFERENCES.

BIBLIOGRAPHICAL.

Autobiography of Froebel. pp. 145-152.
HALL. Bibliography of Education.
MONROE. Bibliography of Education.
REIN. Encyklopädisches Handbuch der Pädagogik.
Steiger's Kindergarten Catalogue.
WALTER. Die Froebelliteratur, Dresden, 1881.

Froebel's Works.

Lang. Gesammte Pädagogische Schriften.
Seidel. Froebel's Pädagogische Schriften.
Autobiography of Friedrich Froebel. Tr. by Michaelis and Moore.
Education of Man. Tr. by W. N. Hailmann. (Int. Ed. Series.)
Pedagogics of the Kindergarten. Tr. by Josephine Jarvis. (Int. Ed. Series.)
Education by Development. Tr. by Josephine Jarvis. (Int. Ed. Series.)
Froebel Letters. Tr. by Heinemann, Boston, 1893.
Froebel's Letters on the Kindergarten. Tr. by Michaelis and Moore.
Mother's Songs, Games, and Stories. Froebel's "Mutter-und Kose Lieder." Tr. by Frances and Emily Lord, London, 1890.
Barnard. Papers on Froebel's Kindergarten, with suggestions on Principles and Methods of Child Culture. Hartford, 1884 and 1890.
Bowen. Froebel and Education through Self-Activity. New York, 1897.
Blow, S. E. (All in Int. Ed. Series.)
Letters to a Mother on the Philosophy of Froebel.
The Songs and Music of Froebel's Mother Play.
Symbolic Education.
Mottoes and Commentaries of Froebel's Mother Play.
Burk. A Study of the Kindergarten Problem.
Comenius. School of Infancy.
Douai. The Kindergarten.
Goldammer. The Kindergarten. A Guide to Froebel's Method of Education. Tr. by William Wright, Berlin, 1882.
Hall. Some Defects of the Kindergarten in America. Forum, Jan., 1900.
Hagen. Ueber Froebel's Kindererziehung's Metode.
Hailmann. Primary Methods. New York, 1888.
Harris. Reports Public Schools of St. Louis. 1875-1877.
Reports of the Commissioner.
Harrison. Study of Child Nature from the Kindergarten Standpoint.
Herford. The Student's Froebel.
Hughes. Froebel's Educational Laws for all Teachers.
Köhler. Die Praxis des Kindergartens. Weimar, 1892.
Kraus-Bölte. Kindergarten Guide. New York, 1880.
Lyschinska. Principles of the Kindergarten. London, 1880.
Mann and Peabody. Moral Culture of Infancy and Kindergarten Guide.
B. von Marenholtz-Buelow.
The Child and Child Nature. Syracuse, 1889.
Philosophy and Method of the Kindergarten.
The New Education. By Work.
Hand Work and Head Work. London, 1882.
Reminiscences of Friedrich Froebel. Tr. by Mrs. Mann. Boston, 1895.
Meyer. Von der Wiege bis zur Schule. Berlin, 1877.
Peabody. (*vide* Mann.)
Lectures in the Training Schools for Kindergartners.
Education in the Home, the Kindergarten, and the Primary School. London, 1887.
Proceedings of the National Educational Association. Kindergarten.
Reports of the International Kindergarten Union.
Ronge. A Practical Guide to the Kindergarten. London, 1893.

Shireff. Essays and Lectures on the Kindergarten. Syracuse, 1889.
The Kindergarten at Home. London, 1890.
Froebel, Life and Letters. London, 1887.
Smith, Nora A. The Story Hour.
Children's Rights.
Smith, Nora A. and Wiggin, K. D. Republic of Childhood.
Froebel's Gifts.
Froebel's Occupations.
Kindergarten Principles and Practices.
Wiebe. Paradise of Childhood. Springfield, 1896.
Wiltse. The Place of the Story in Early Education.
Weber. Die Geschichte der Volksschulpädagogik und der Kleinkindererziehung.

LITERATURE.

The Secondary School System of Germany. FREDERIC E. BOLTON. New York, 1900.

Dr. Bolton has divided his work into six chapters, which deal with (1) general organization and management of German secondary schools, (2) teachers, (3) movements toward reform in course of study, (4) present course of study, (5) secondary and higher education of women, (6) conclusions. The book is enriched with numerous statistical tables and with a brief and well selected bibliography of the subject. As compared with Russell's "German Higher Schools," it is noticeable that Dr. Bolton devotes less of his space to a history of the higher schools and to a consideration of the subjects of the curriculum in order to discuss thoroughly the administration of schools and the problems thereby suggested. The two books are complimentary, both are necessary to an understanding of the subject. The general reader will find the two last chapters of great interest and value.

Dr. Bolton has greatly increased the usefulness of his book by keeping the American teacher and the American school continually in mind; his previous experience as high school principal has enabled him to translate the German system into American terms. His estimate of the German system is remarkably sane, he recognizes its strength without falling into extravagant eulogy; the work contains a vigorous protest against the current depreciation of American high schools.

The last chapter contains an excellent criticism of the modern German standpoint in higher pedagogy. "Education has been discussed too much from the logical and religious-moral standpoints, efforts to experimentally determine methods of procedure, capabilities of pupils, educational values, means towards ends and many other educational problems susceptible of experimental study have received little attention at the hands of either psychologists or pedagogues. . . . . . In many cases German pedagogy is based upon traditions and hypotheses rather than on principles evolved from experiences."

The Training of Teachers for Secondary Schools. JAMES E. RUSSELL. Proceedings of the W. E. A., 1899.

Prof. Russell opens his paper with a brief summary of existing conditions in the secondary teaching profession. The college graduate now has but a slight advantage in gaining admission to a secondary school. The specialist and the normal school graduate who have succeeded the collegian have been tested and the popular verdict is that they too are poor craftsmen. The only hope of the ambitious collegian is to put himself distinctively above his competitors in his chosen field. But what is the ideal preparation for such teachers? Present conditions seem to me to indicate four qualities pre-eminently desired in the teacher: (1) general knowledge, (2) professional knowledge, (3) special knowledge, and (4) skill in teaching. The first requisite is covered by A. B. degree. In the field of general professional preparation, the secondary teacher needs to know the psychology of the adolescent period and the standards of culture which have prevailed in the past and now exist among various peoples. Information gained from the study of school economy, school hygiene and management of schools and school systems at home and abroad should be included under this head. Special knowledge is an absolute necessity in the qualifications for secondary teaching, without it the teacher becomes a slave to manuals and text books; his work degenerates into formal routine with no life, no spirit, no educative power, because he knows no better way. Technical skill in teaching is essential in a secondary school because it requires an arrangement and presentation of the subject matter of instruction in a way unknown in elementary education and unheeded in most college teaching.

The Economic Aspect of Teachers' Salaries. CHARLES BARTLETT DYKE. Columbia University Contributions to Philosophy, Psychology and Education. Vol. VII, No. 2. New York, 1899.

Prof. Dyke divides his monograph into two sections, the first, devoted to the economic aspect of teachers' salaries contains chapters on (1) the economics of teachers' salaries, (2) the teacher's salary and workingman's wage compared, (3) American and European salaries, (4) why teachers' salaries are low, and (5) the improvement of teachers' salaries. The second section treats of public school maintenance. Prof. Dykes quotes numerous tables showing the rise in teachers' salaries during the last thirty years, but he likewise demonstrates that the average teacher's wage is considerably below the earnings of the ordinary employee in manufacturing establishments. Compared with teachers' salaries in Europe the facts are still more striking, while American working men receive much higher wages than their European contemporaries, the American teacher obtains for her services a sum absolutely smaller than the English and German teacher, and is on parity with French teacher. This does not take into consideration the smaller cost of living in Europe. This unfortunate condition of affairs is due, in Prof. Dyke's opinion, to tradition, sentiment, public ignorance, public indifference, the inefficiency of the teaching force and their sex. As remedies, the author suggests increased efficiency on the part of the teachers and the development of a teacher's trades union. The monograph is enriched with numerous tables and charts, which enable the student to base his conclusions on fact rather than on hypothesis, as heretofore. In calling the attention of the public to the unfortunate condition of the teaching profession in this country, and in suggesting the factors involved in the problem, Prof. Dyke has performed a distinct service of no small value. The study gives evidence of careful research.

Salaries of Teachers. JOHN B. CLARK, Columbia University Quarterly, Vol. I, p. 3, March, 1899.

In this study of the economic principles underlying teachers' salaries, Prof. Clark enumerates the factors which prevent teachers from receiving the wages which their ability would command in other occupations; they are (1) the relative agreeableness afforded by the intellectual pleasure of presenting scientific truth to young minds and the opportunities offered in the higher schools for scientific investigation, (2) the intermittent character of the work with its holidays, vacations and free hours, and (3) the comparatively small risk incurred in becoming a teacher. These causes will always become operative to a certain extent. "A teacher can always be had for a certain number of dollars 'and other good and valuable considerations;' while in other professions, men of like ability who are paid chiefly in dollars, are of necessity getting more of them."

Hope for the future lies in the selective process which takes the few individuals best qualified and places them on a par with their intellectual peers in regard to income in other professions. At the present time resources in the higher schools are not used economically. The numbers of the teachers can only be reduced by concerted action which must come through centralization. "The State that has forty colleges could get on better with ten;" the colleges could then afford to pay higher salaries and get better teachers.

Report of the Committee on Normal Schools, Z. X. SNYDER, Chairman. Proceedings of the National Educational Association, 1899.

This report falls into six sections, viz., the function of the normal school, training schools, geographical and historical variations that exist in normal schools in the United States, the inner life of a normal school, normal school administration and State normal schools.

Under the first heading the normal school curriculum is discussed. Two courses are suggested, one for fully prepared students who should be high school graduates, and a substitute course for students from the grammar schools. The professional course should be not less than two years in length, it should not be constant, but variable and tentative; the committee suggests twenty-eight different centers for instruction. These centers include the mathematical, physical, biological and social sciences in addition to strictly professional work, besides music and art. The committee enumerates as professional subjects, the philosophy of education, the science and art of teaching, the history of education and school economics, but makes no effort to determine their relative values or functions. Such vagueness cannot but be disappointing and inadequate. The attempt to develop twenty-eight different lines of training in two years must inevitably result in superficiality and shallowness. The minimum course includes a review of the elementary branches and the secondary studies in addition to the foregoing. The sanctioning of any such minimum course seems to the writer to be a mistake; if there must be secondary school work done in connection with normal schools, why not place it in a distinct division of the school instead of intermingling the two? No more effectual means for securing an all-round mechanical smattering could possibly be devised than the measures recommended in this section of the report.

Division two of the report treats of training schools and presents a marked contrast to section one. Instead of loose generalities we have twenty-nine specific theses or recommendations treating of the practical side of normal work in all its phases, and great thoroughness without degenerating into mechanism or pettiness. Section three is the best extant account of the types of normal schools existing in the United States, with a brief sketch of their genesis. The chapter on the inner life of the normal school lays due emphasis on social activities, and is to be commended to the "driving" type of the principal. The sections given to administration contain valuable summaries and descriptive materials.

While the last five sections of the report are distinct contributions to normal school administration, the report, on the whole, must be pronounced a failure, because it dodges the discussion of the most fundamental phases of the normal school problem. It does not emphasize the dependence of the normal schools on the secondary school system, nothing is said of the theoretical side of professionel training, the qualifications and preparation of the normal school instructing force is entirely omitted. Outside public opinion needs clear, distinct utterances in behalf of a higher standard of professional training; the committee has offered it a report which either equivocates or is silent on the main necessities of the situation, but which contains much excellent advice on minor points.

Preliminary Report of Committee on the Formulation of a Course of Study. (Reports from the various sections, by A. G. BOYDEN, Bridgewater; Miss MARION BROWN, New Orleans; HOMER H. SEERLEY, Cedar Falls, R. I; BOONE YPSILANTE and EDWARD T. PIERCE, Los Angeles.) Proceedings of the National Educational Association, 1898.

Each of the above persons endeavored by the circulation of a questionnaire to obtain the best expert opinion of the locality in reference to the requisites for a normal school curriculum. These reports, therefore, contain the best summary of criticism of the normal schools which has yet been published. President Seerley gives a summary of the prevailing view among three classes of educators, viz.: (1) college and university men, (2) city superintendents, and (3) normal school officials. College presidents and professors thought that the normal school curriculum might be improved by connecting it more closely with the work of the secondary schools and State universities, by eliminating a large part of the academic instruction and by making the training more intensive and thorough. The city superintendents object to the normal schools because they admit their pupils without proper preparation and graduate them with a knowledge of methodology and devices rather than of the doctrines and principles of education. "There is a tendency, they think, to make teaching a trade rather than a profession, and they place most of the cause for this growing evil at the door of the normal school, which tries to instruct its students in the mechanism of management and teaching before they are prepared in scholarship, age or experience in life to view educational ideas and methods from the true and proper standpoint." The normal school principals considered a large amount academic instruction necessary under present conditions, objected to uniformity and laid great emphasis on the "practice work."

H. D. SHELDON.

The following are brief notices of a few of the more important articles that have appeared in the Japanese Child Study Magazine, since its origin a year ago.

(1) "Contents of Japanese Child-minds." In this study Mr. Takashima applied a method in which he asked children to make drawings of any sort which they might think of. Thus, a great many thousands of drawings were gathered from 352 children of first four grades in a primary school. He classified them and found the following results. There were 194 different objects of drawings among 2,931. [1]Among 194 there were 105 which belong to artificial objects, while 89 to natural objects, such as man, animals, plants and scenery. When he classified them according to the different grades he found as follows:—1st Grade (78 children), 64 objects: artificial, 33; natural, 31. 2nd Grade (90 children), 127 objects: artificial, 70; natural, 57.

(2) "Development of Child Study in Japan." See *Ped. Sem.*, Vol. VI, p. March, 1899.

(3) "Plays and Toys." Mr. Matsumoto making some historical review on plays and toys in Japan, quotes Bakin, the famous Japanese Shakespeare, who wrote a very interesting chapter on plays and toys a century ago. He says that to propound a riddle before children is to cultivate their sagacity; to teach them to play 'cat's-cradle,' a puzzle done with a string looped over the fingers, is to train their skill in weaving; and, to teach how to play cards or 'kaiawase,' a kind of game played with shells which are beautifully painted, is to train quick movement of eyes and muscles.

Thus, in Japan, there are many hundred different plays and games and they are carefully taught by parents and teachers. Mr. Matsu-

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[1] See table on opposite page.

Contents of Children's Minds.

TABLE.

	NO. OF DRAWINGS.			NO. OF OBJECTS DRAWN.		
	By Boys.	By Girls.	Total.	By Boys.	By Girls.	*Total.
1. Furnitures	147	336	483	24	33	45
2. Plants and Vegetables	137	212	349	19	20	25
3. Scenery	233	163	396	17	12	22
4. Soldiers	49	0	49	16	0	16
5. Man and parts of body	64	113	177	13	7	15
6. Buildings	48	148	196	8	6	13
7. Armors	311	7	318	12	2	12
8. Animals	80	89	169	8	8	11
9. Transportables	75	42	117	6	6	8
10. Stationaries	60	117	177	5	8	8
11. Games	90	6	96	5	1	5
12. Toys	32	49	81	3	3	5
13. Toilets	0	80	80	3	0	3
14. Musicals	0	27	27	0	3	3
15. Food	0	4	4	0	2	2
16. Money	2	0	2	1	0	1
Total			2931			194

*This total excludes all duplicate.

moto classifies them into five groups and calls them: (1) Sensational games, (2) Athletic games, (3) Imitative games, (4) Æsthetical games, and (5) Intellectual games.

During the first period of a child, which he calls "sensational-games-period," all toys are made to appeal to sight, hearing and touch. In Japan, "face games" and many other "hand games" are very popular in this period. They need no help from toys but face and hands. In a later period, out-door games, such as kite-flying, tilting, top spinning, and such are very common among boys.

Scientific toys, such as steam-engine, steamboat, train and others are widely used by Japanese children and the fact helps our school teachers on natural sciences a great deal.

The writer thinks that the ideal way in primary schools would be to so modify their methods that children may take study as a part of play and not as study.

(4) "Stories." Some Japanese stories are known to be six hundred years old. The main source of Japanese stories is Buddhism, while Japanese history, biography, Chinese antiquity and such like gave birth to many interesting stories. In a book which was published a century ago it is said that by the use of stories they intend to illustrate the ideas of the seasons, climate, and weather, the reason of rise and fall of an individual, State and race, and the proper application of moral truth.

In his discussion Mr. Matsumoto goes on to state that the story is: (1) to cultivate sympathy of children; (2) to teach morality more concretely; (3) to exert a stronger influence over the conduct of the child by use of the character; (4) to teach a child that there is a world besides himself. However, he cautions that we must teach a child not to imitate any characters in a story with a great care.

The story may be based (1) on fact and (2) on imagination. A child likes to hear a simple imaginary story at first and then his tastes will grow toward a story based on facts. At a later period, his tastes will grow gradually toward more complex imaginary story which is not far from facts and daily experience.

The story must be told in a good language. Extreme exaggeration must be avoided. Immoral and cruel things must not be told in minute detail. Gestures and pictures are not used extensively in Japan and the story teller is earnestly desired to use them.

(5) "Children's Ideals of Profession." Mr. Fujü inquired of 117 boys of the first two years at a high school as to their ideals of a profession and got the following result:—

Army and navy,	62
Engineers,	15
Merchants,	8
Statesmen,	6
Horticulturists,	5
Writers,	4
Biologists,	3
Scientists,	2
Physicians,	2
Unsettled,	10
	117

Mr. Akata inquired of 48 boys and 47 girls at a primary school, and secured the following result:—

BOYS.		GIRLS.	
Soldiers,	21	Tailors,	12
Merchants,	11	Merchants,	12
Physicians,	3	Teachers,	10
Carpenters,	3	Musicians,	1
Bankers,	1	etc.	
Scholars,	1		
etc.			

From those two detailed studies we may be able to sum up the result as follows:—

(1) Children's ideals are not definite.
(2) The following have a strong influence:
  (a) A local hero.
  (b) Father's profession, with his success or failure.
  (c) Residence.
  (d) Father's social standing and wealth.
  (e) His daily needs and wants.

(3) While a good number of girls expressed a desire to become school teachers there were none among boys.

(4) Children are inclined toward the more substantial profession than the abstract one.

(5) Home influences and moral training at school have a great force to put these ideals into practice.

(6) Family tradition and religious miracles are made after a strong force to perfect their ideals.

(6) "Children's Conception of Death." Mr. Takashima finds that children think that death is the end of everything. There is a very small proportion of children who think that the soul will survive. His study reveals a great danger of the Japanese as a race at the present age. School teachers are most indifferent in religion, otherwise rank agnostics. They are teaching children that there is no God, no spirit, and no future.

Thus, the author emphasizes that religious instruction must be put aside entirely from schoolrooms. Teachers must not teach any theology. Better let children come to their own conclusions on those subjects.

(7) "The Passions of Children and the Weakness of the Japanese as a Race." Mr. Takashima points out eight weaknesses of the Japanese as a race, in a hurried manner. On the whole, he thinks that Japanese are far more emotional than many other races. The stronger emotional characteristics of people are traced back to their childhood. (1) They lack steadfastness of purpose, ambition and enterprise; (2) They grow old faster; (3) They are more easily satisfied; (4) They are more irregular; (5) They are headless—lack of sound meditation and calculation; (6) More narrow-minded; (7) Lack of economy; (8) Lack of public spirit.

(8) "Fear and Conduct of Children." To study 'fear' Mr. Akata asked, among many others, such a question as "what do you fear most?" and 87 children of primary school made the following answers:

1.	Robbery,	45
2.	Insane people,	16
3.	Murderers,	6
4.	Ghosts and spirits,	5
	etc.	

Fear among children is due more to story than to experience with the objects of their fear. Stories of ghosts and such like are dying out in Japan, and there were only one boy and four girls who feared ghosts.

The writer asked again, "whom do you fear most?" A majority answered father and then the policeman. Thus:—

Fathers,	25
Policemen,	24
Nobody,	22
Teachers,	4
Mothers,	4
etc.	

In his extended discussion the writer maintains that training of children must not be entrusted entirely to women.

When he asked what is a good thing to do, and what is a bad thing to do? the children answered as follows:—

	GOOD THINGS.			BAD THINGS.	
1.	Honest things,	39	1.	Dishonesty,	20
2.	Filial piety,	16	2.	To rob,	18
3.	Kindness to others,	5	3.	To lie,	16
4.	Thrifty,	4	4.	To quarrel,	11
	etc.			etc.	

The conduct of a child is largely determined by a selfish pleasure-seeking. Distinction between good and pleasure is not clear among young children. Honesty and dishonesty lead the good and the bad respectively. Girls show more obedience to parents and elders than boys. Boys are decidedly inclined to fight while girls are to keep peace.

(9) "Literary Tastes in School Text Books." The school text book is a burning question in Japan. Mr. Isogarashi discusses to a great length the importance of literary taste in school text books and says that the æsthetic element is of the greatest importance, (1) because, while reading books the pupil will be helped through their inviting æsthetic element, to build up his moral character; (2) because it will cultivate his subtler emotions, and (3) because it ought to become a model for composition.

Then, he makes a careful comparative study between Japanese and American readers. He thinks that the American text books are far more complete from any point of view. Japanese educators and teachers lack the inspiration of close connection with their composers and writers.

(10) "Music and Morality." When she made some study on their "likes and dislikes" Watanabe found that penmanship leads in the list of dislikes and after that music. Thus, she was led to make some further investigations on music. She thinks, from her careful study, that the main reason why children are not interested in music is because of the lack of proper songs, proper method and qualified teachers, and not because of the lack of interest among children. She reminds us that the most important step, and yet one so often overlooked by teachers, is to begin with a simple song with a simple tune which children can easily sing and understand. A song which they like best is one which is so simple, easy and yet very active. Their minds are active, and children are much fascinated in those active songs everywhere.

After discussing at length the relation of music to morality after the usual fashion, she sharply points out the importance of music for the uplifting of the morality of a nation.

F. M. YAMAGUCHI.

BOOK NOTES.

G. S. H.

Education in the United States, edited by NICHOLAS MURRAY BUTLER. A series of monographs prepared for the United States exhibit at the Paris Exposition, 1900. J. B. Lyon Co., Albany, 1900. 2 Vols. pp. 977. Price, $3.50.

These volumes present the present status of American education under twenty topics by as many representative writers. The topics are as follows: Introduction, by the editor; organization and administration, A. S. Draper; kindergarten, Susan E. Blow; elementary, W. T. Harris; secondary, E. E. Brown; college, A. F. West; university, E. D. Perry; women, M. Carey Thomas; training of teachers, B. A. Hinsdale; school architecture and hygiene, G. B. Morrison; professional, J. R. Parsons; scientific, technical and engineering, T. C. Mendenhall; agricultural, C. W. Dabney; commercial, E. J. James; art and industrial, I. E. Clarke; defectives, E. E. Allen; summer schools and university extension, H. B. Adams; scientific societies and associations, J. McK. Cattell; negro, Booker T. Washington; Indian, W. M. Hailmann.

The type is clear and of generous size, the page large and open, the paper and binding cheap but not mean. The work as a whole is, as the distinguished names of the authors sufficiently indicate, an admirable conspectus of the late development and present status of education in this country.

Educational Aims and Methods, by SIR JOSHUA FITCH. The Macmillan Co., New York, 1900. pp. 448. Price, $1.25.

The lectures and addresses given at various times within the last few years are here published. The present volume is more miscellaneous and less systematic than the author's former "Lectures on Teaching." It treats of Bible teaching, Socrates and his method, the education of character, reason, hand and head work, endowments, Ascham, teachers' institutes and conventions in America, Thring, university extension, Lancaster, Pestalozzi, the future of the Sunday School, women in universities and the French leaving certificates.

The Messages of the Earlier Prophets, by FRANK H. SANDERS and CHARLES F. KENT. Charles Scribner's Sons, New York, 1899. pp. 304.

The series contemplated of twelve volumes, of which this is the first, is pedagogically interesting because the definite results of sober scholarship are represented by experts meant to enable every reader of the Bible to appreciate and obtain a mastery of the essential facts and teachings of it in non-biblical language. This gives the work a unique interest.

A Practical Handbook on Sunday School Work, by L. E. PETERS. American Baptist Publication Society, Philadelphia, 1900. pp. 128.

This is a very favorable specimen of the growing body of Sunday

School literature by a Baptist Institute worker. The first part is devoted to methods, and the last to a characterization of childhood. Unfortunately the author has not availed himself of the epoch making new literature upon this latter subject, and is a little platitudinous.

The Life of Dwight L. Moody, by WILLIAM R. MOODY. Fleming H. Revell Co., New York, 1900. pp. 590.

The son of the great evangelist here presents the story of his life from boyhood to the end. The work is illustrated with nearly one hundred cuts.

Domestic Science in Grammar Grades, by MRS. L. L.W. WILSON. The Macmillan Co., New York, 1900. pp. 193. Price, 60 cts.

The home of savages, half-civilized, and civilized people, form the first subject; then follow the evolution of fire, matches, the Roman and modern kitchen. Foods are treated under the heads of proteids, carbo-hydrates, bread, salads, drinks and condiments. The dining-room follows, then the bed-room and its contents are traced from Bible and classical times down. The laundry, household pests and house cleaning, and finally sewing conclude a really new book.

School Sanitation and Decoration, by SEVERANCE BURRAGE and HENRY T. BAILEY. D. C. Heath and Co., Boston, 1899. pp. 191. Price, $1.50.

This is a valuable and practical contribution to its subject; treating location of schools; construction and requirements of school buildings; ventilating, heating, lighting; sanitation; the old country schoolroom; children; influence of school life upon the eye; school authorities and patrons; beauty in school work. It is copiously illustrated with 9 photogravures, 52 plates and 28 figures in the text.

Nicholas Comenius, or Ye Pennsylvania Schoolmaster of Ye Olden Time, by WILLIAM RIDDLE. C. W. Bardeen, Syracuse, 1898. pp. 469.

This story has its sphere in the schoolroom, the struggles of old and new methods in the country, its pathos is the discharge of the old masters, the triumph of a young superintendent heavily handicapped by prejudices and ignorance, the conversion to better ways of a very influential old millwright preacher, the honorable and enthusiastic reception of Comenius in his old age at the teachers' institute, and finally the wedding of the young master and the daughter of his chief supporter.

Commissioner Hume: A Story of New York Schools, by C. W. BARDEEN. C. W. Bardeen, Syracuse, 1899. pp. 210.

This tale was published twenty years ago in the *School Bulletin* as a sequel to Roderick Hume, and gives an interesting picture of certain phases of school life in New York State.

Three Score and Ten in Retrospect, by J. W. HOOPER. C. W. Bardeen, Syracuse, 1900. pp. 80. Price, $1.00.

A country schoolmaster, who began his work in 1847, here tells his reminiscences in a way that illustrates most interestingly the conditions of school work in New York State during the period he describes.

The Education of the Young in the Republic of Plato, by BERNARD BOSANQUET. University Press, Cambridge, 1900. pp. 198.

This is a convenient introduction to the study of the Republic, of which it contains a new translation of most of the second and all of the third and fourth books. An introduction contains an account of Greek education in its best days, education after Plato, etc.

The Care of the Child in Health, by NATHAN OPPENHEIM. The Macmillan Co., New York, 1900. pp. 308.

This is an eminently practical book treating of the regimen of pregnancy, the baby's outfit and nursery, feeding, bathing, sleep, exercise, clothing, habits, relation to parents, education, defectives, diseases.

Discovery of a Lost Trail, by CHARLES B. NEWCOMB. Lee and Shepard, Boston, 1900. pp. 282. Price, $1.50.

This is a simple study of life with plain suggestions of confidence, patience and gladness. It essays no novelties or metaphysical fugues, and treats confidence, patience, will, decision, power, expression, gladness, etc., in a wholesome, hortatory way.

An Outline of the Text of Taylor's "Study of the Child," by HILL M. BELL. Des Moines, Ia., 1900.

This outline course on Taylor's "Study of the Child" is a rather good list of the main topics in this new and growing field conveniently arranged.

Introduction to Zoölogy, by CHARLES B. DAVENPORT and GERTRUDE C. DAVENPORT. The Macmillan Co., New York, 1900. pp. 412. Price, $1.10.

This book has over three hundred well-chosen illustrations, and can best be characterized by the topics of the leading chapters in order as follows: the grasshopper and its allies, the butterfly, beetle, fly, lithobius, spider, crayfish, daphnia, earthworm, nereis, slug, clam, starfish, hydra, paramecium, smelt, newt, lizard, sparrow, mouse, the development of the frog's egg. The appendix contains an outline of laboratory work in each of these topics, titles on the ecological and systematic zoölogy of American animals, a synopsis of the animal kingdom, with a glossary and index.

An Outline of Political Growth in the Nineteenth Century, by EDMUND H. SEARS. The Macmillan Co., New York, 1900. pp. 616.

The histories and problems of the Latin nations,southeastern Europe and Russia, the Teutons, Great Britain and her colonies, the United States, Spanish and Portugese America, and unclassified countries are here outlined in an interesting and comprehensive way,with a bibliography of sources at the end of twenty pages.

A Short History of the United States for School Use, by EDWARD CHANNING. The Macmillan Co., New York, 1900. pp. 401.

This work is copiously illustrated, contains a number of interesting historical maps, passes lightly over the early periods of our history, and comes down to McKinley's administration. For colonial life other authorities must be consulted.

Outlines of Economics, by RICHARD T. ELY. The Macmillan Co., New York, 1900. pp. 432. Price, $1.25.

This was undertaken as a revision of the author's political economy, but has become practically a new book. Though it does not supersede the older one it is more theoretical, and aims to take the student further. To this end much space and attention is given the bibliography, and there is a valuable list of topics suggested for essays, discussions and debates.

A Modern Reader and Speller, edited by GEORGE RIDDLE. Herbert S. Stone and Co., New York, 1900. pp. 629.

This well known elocutionist, formerly connected with Harvard College, prints his kit of selections for public reading, perhaps one hundred or more in number, narrative, oratorical, dramatic, humorous and poetic. They are in very large part new, very modern, out of the ordinary, and therefore interesting.

Outlines of a System of Classical Pedagogy, by THOMAS FITZ-HUGH. Mayer and Müller, Berlin, 1900. pp. 24.

The author outlines in detail his course and theory of work during his ten years in the University of Texas in an interesting way.

Cornelius Nepos Twenty Lives, by JOHN E. BARSS. The Macmillan Co., New York, 1900. pp. 316. Price, 90 cents.

This mainstay of second year Latin is equipped with notes and vocabulary, with exercises for writing Latin in the end. The text and the material get-up of the book are in every way commendable.

Der Scheik von Alessandria und seine Sklaven, von WILHELM HAUFF. Edited with notes and vocabulary by Walter Rippmann. The Pitt Press Series. The Macmillan Co., New York, 1900. pp. 183. Price, 50 cents.

This story has obtained an enviable reputation in Germany, but we consider it unfortunate that the story of Abner the Jew has been omitted.

The Temple Primers. The Macmillan Co., New York, 1900. Price, 40 cents each.

The History of Language, by HENRY SWEET. pp. 154.
Some Problems of the Day in Natural Science: An Introduction, by ALEX. HILL. pp. 140.
A History of Politics, by EDWARD JENKS. pp. 174.

These three volumes seem, upon cursory inspection, to fully sustain the promise of the earlier works in the series, which were briefly characterized in the preceding number of the *Seminary*.

Second Book North America with an Especially Full Treatment of the United States and its Dependencies, by RALPH S. TARR and FRANK M. MCMURRAY. The Macmillan Co., New York, 1900. pp. 469. Price, 75 cents.

This second book fully realizes the anticipations excited by the first, noted in our last. The 360 cuts are well chosen, interesting and suggestive. Maps are reduced to their proper prominence. Modern fads are recognized if they have anything in them. The appendix contains a few pages of valuable references, tables of areas, populations, etc., and an index which is also a pronouncing vocabulary. As a whole the work is tasteful and pleasing.

A Friend of Cæsar: A Tale of the Fall of the Roman Republic, Time 50-47 B. C., by WILLIAM STEARNS DAVIS. The Macmillan Co., New York, 1900. pp. 501. Price, $1.50.

This is a voluminous and rather ambitious work by a recent graduate. It shows unmistakable signs of ability, but also reveals unmistakably the fact that great progress and labor of soul must be yet undergone before any high degree of success is possible.

Horace Mann in Ohio: A Study of the Application of his Public School Ideals to College Administration, by GEORGE ALLEN HUBBELL. Columbia University Contributions to Philosophy, Psychology and Education, Vol. VII, No. 4. The Macmillan Co., 1900. pp. 70. Price, 50 cents.

The world knows Horace Mann and his educational labors and teachings in Massachusetts. His transference to a new and remote practical field in Ohio in the latter part of his life, which was so very critical for a man of his ideals and nervous temperament, has never been adequately written up, and Mr. Hubbell, who was a pupil there, has here performed a real service. Interesting, too, are the letters he prints stating their impressions of Horace Mann from other former pupils there. For many years after his death, this institution maintained a desperate struggle with many adversities and even calamities to maintain a high standard in this State of many colleges. The attempt of the Unitarians to graft their eastern culture upon the wilder western Christian denomination was a bold and at one time promised to be a successful venture, but the conditions of such ethnic pedagogy was not then well understood.

Work and Play, by JOHN E. BRADLEY. The Pilgrim Press, Boston, 1900. pp. 208.

Bradley, who gracefully dedicated this tasteful book to his wife, here discusses in successive chapters—student life, intellectual growth, work, play, health, habit, the cost of foundations, unconscious education, reserved power, the scholar in public life, castles in Spain, what is education? They were first given to his students and most of them first reported or published in the College Rambler, and are now enlarged for a larger public. The teachings set forth are wholesome, stimulating and sane to the core, and show that this pupil of Mark Hopkins, like his teacher, knows how to keep in close and healthful rapport with his pupils.

Side Lights on American History, by HENRY W. ELSON. Series II. The Civil War and our Own Times. The Macmillan Co., New York, 1900. pp. 410. Price, 75 cents.

This volume begins where its predecessor left off. About half of it is devoted to the Civil War and the rest to subsequent events ending with the close of the Spanish War.

Elementary Chemistry for High Schools and Academies, by ALBERT L. AREY. The Macmillan Co., New York, 1899. pp. 271. Price, 90 cents.

This book is the result of six years' laboratory experimentation on the theory that the best work in chemistry is derived from the process of thought which the student follows when questioned during his experiment. Each student in a large class cannot be thoroughly questioned, and therefore a special set of questions is here added to guide the student's inferences and suggest lines of thought.

The Hexateuch According to the Revised Version, edited by J. ESTLIN CARPENTER and G. HARFORD-BATTERSBY. Vol. I. Introduction and Tabular Appendices. pp. 279. Vol. II. Text and Notes. pp. 359. Longmans, Green & Co., New York, 1900.

These volumes are intended to place before English readers the principal results of modern inquiry into the composition of the first six books of the Old Testament. It represents a vast amount of work continued for many years by many men, as well as a great deal of labor by the Committee of the Oxford Society of Historical Theology, who began it in 1891. It has several great advantages over the Haupt Polychrome Bible within the narrower limits to which the present work confines itself. First the notes of the second and the entire introductory volume are devoted to brief and scholarly statements of the grounds on which modern criticism rests. The first volume is almost a model of condensed presentation. This the Polychrome Bible lacks. Again the Carpenter-Battersby work has an easily comprehensible scheme of showing by letterings at the head of the page the original authorities of each passage, and by moving the paragraphs or phrases to the right or left the degree of probability of one or another source can be indicated, which the uniform coloring in the Polychrome edition, which compels every part to be categorically assigned to some source without regard to the degree of probability, lacks. And lastly the style and make-up of this book pleases as much as the Polychrome offends good taste.

NOTES.

H. L. Nelson, in a significant address at the Williams alumni dinner, appeals for specialization in the humanities as the proper policy for that institution. He quotes and agrees with G. Stanley Hall that through specialization the way of return is open for the small college to its old time usefulness and distinction. He quotes Jebb's late argument that humanism is the best training not only for a literary but for most public careers; also Brice, who pleads that the change from literary to scientific teaching "has gone very much too far," urges that the present reaction against science at Oxford and Cambridge was because it degenerated into a cram of facts or engrossment in money making occupations at a time when the imaginative and moral side ought to be stimulated. Balfour has taken still higher ground, pleading that all education not in large part literary is maimed and one sided. Not to be at home in the great imaginative literature, not to be in sympathy with great literary artists and thinkers of the past, is to leave the higher, finer sympathies untrained and tends to produce "a hard, dry, unfertile type of mind." "If Williams College wishes to become a center of intellectual light and leading in the twentieth century, it must breed humanists."

The educational work of Edwin D. Mead, Editor of the New England Magazine, is worthy of the attention of all educators. In his Editor's Table and as Founder and President of the Twentieth Century Club, and Director from the first of the Old South work founded by Mrs. Hemenway in 1881, and as writer of editorials for the leading Boston dailies and of occasional pamphlets, he has not only made himself in the language of Edward Everett Hale, whose friends would make him the exception, the leading literary man of Boston.

His own work on Kant, his volume on Luther, his pamphlets on Thomas Wentworth Higginson, Horace Bushnell, the Two New Englands, the Old and New Books of South America, the Old South Pilgrimage to Newburyport, etc., illustrate what an earnest, sane, absolutely frank and able man worthily seconded by the many public and private activities of his wife can do. Besides all this work he has a sane and helpful word on most of the great public questions of the day.

Charles Dudley Warner's Presidential Address before the American Social Science Association in May, on the education of the negro, states that millions have been invested in his higher education supposing this would compel the lower. He pleads for a reversion of this policy. We must confess a mistake. The negro must be no longer the pawn of politics; lower and especially industrial education is the end and no more top dressing of culture on fields without depth of soil. Negro crime is increasing faster than that among whites, and faster among northern than among southern negroes. This race has gifts of music, temperamental gaiety and emotional religion, but lacks responsibility and thrift. We cannot apply the same treatment as to higher races. No negro tribe ever invented a language and Africa shows no progress. Contact with higher races has produced no permanent effect. Drop philosophy, modern and ancient languages, higher science and mathematics then, and attend to rudiments.

The *Seminary* has lately received a bundle of catechetical pamphlets, which show a strange revival of interest in a mode of educational work which the Catholic Church has always maintained the importance of, but which modern pedagogy has long since discarded. In a late number of the Congregationalist Dr. F. E. Clark advocates this method, and names sixteen of these recent pamphlets with a few words of commendation. While most of these catechisms differ from that of the Westminster Assembly in being couched in scripture language, they hold to the stereotyped question and answer method which is mediæval and outgrown. As an expression of reaction against the uniform International Series, the catechetical movement is a wholesome sign, but, unfortunately, its advocates invite the Sunday School work backwards and not forwards. Another error is in laying undue stress upon the Bible phraseology. Much of this, especially the Psalms and the sayings of Jesus, is unimprovable, but scripture phraseology often disguises truth not only in the authorized but in the new version. Sanders and Kent, in their paraphrasing of the prophets, have performed a great pedagogical service, clearing up much that is obscure and archaic, and presenting the soul of truth in a clearer way than it stands in the oriental phraseology of the prophets. The need of radical reform in Sunday School work is imperative. Its importance is coming to be more and more recognized, so that on the whole, discouraging as is the catechetical reaction, there is hope at the bottom of the casket.

In the *Forum* for June, 1900, Dr. G. Stanley Hall prints an article entitled "College Philosophy," in which he vigorously criticises the ultra epistemological methods of some of his philosophical contemporaries by name. He urges that to deprive adolescent souls of a full-hearted belief in the external world by the method of Berkeley, then to undermine the belief in the reality of the self or *ego*, and to plunge them in the solipsistic hoppo or volute is dangerous. It always makes life and nature seem more or less unreal. It introverts at a time when the mind should be most objective. Pedagogically the soul does not need to encyst itself thus to metamorphose into a higher type of psychic life. He discusses the methods of saving students thus shipwrecked, of which there are many—religious, moral, psychological, common sense. The method he regards as the modern analogue of sophism among the Greeks and scholasticism in the Middle Ages. In the days of Abelard and after, the question was whether words could express reality; now, it is whether sense or thought can know it. Again nature does not pick off deciduous leaves to make room for buds. The Scotch school, and many men like Fechner, Fouillée, Sergi and Schumann, renounce the theory of knowledge; for most students it is better to keep out of agnosticism than to get out.

CLARK UNIVERSITY, 1889-1899. DECENNIAL CELEBRATION.

Clark University, having only graduate and therefore few students, and practically giving only the degree of Doctor of Philosophy, has had no commencements, but marked the close of its first decennium by exercises of an unique type.

It invited Santiago Ramón y Cajal, the leading neurologist of the world and Rector of the University of Madrid, to leave his work at home and come to this country and lecture for a week to the leading neurologists of America. His visit, coming as it did, just at the close of the Cuban War, attracted great attention, and his frank and manly utterances in various newspaper interviews were said by several men of great eminence to be the sanest words upon the subject. He came with his wife and was the guest of one of Worcester's leading citizens, Honorable Stephen Salisbury, but despite the many social attractions he devoted himself with extraordinary assiduity day and night to the preparation of his lectures, largely on his own researches, on "The Comparative

Study of the Sensory Areas of the Human Cortex," "Layer of the Large Stellate Cells," and "The Sensori-Motor Cortex." These lectures given daily in French were illustrated by many large charts, especially prepared by his own hand and afterwards given to Clark University, and are now printed with thirty original plates illustrating them.

Emile Picard, Professor of Mathematics at the University of Paris, selected by the mathematical department as perhaps the leading European authority in his field, also attracted great attention. In person, language and artistic perfection of presentation, his lectures left nothing to be desired, and the opinion of several of the experts present was that he gave them new and high ideals of the most effective methods of presenting the highest mathematical themes. His topics were the development of the idea of function, the theory of differential equations, and of analytic and other functions.

Ludwig Boltzmann, the distinguished head of the department of Theoretical Physics at the University of Vienna, and the continuer of the lamented Hertz, gave four lectures on the fundamental principles of mechanics. His lectures were illustrated by models made by himself and brought from Vienna. Madame Boltzmann accompanied him in his visit to this country.

Angelo Mosso, now Rector of the University of Turin, and eminent for his physiological researches in sleep and fatigue, and head of the new laboratory 13,000 feet high in the Alps, for the study of physiological conditions in great altitudes, lectured on "Psychic Processes and Muscular Exercise" and "The Mechanism of the Emotions."

August Forel, of Zürich, lectured on his own researches on the two subjects, which have made him famous,—hypnotism and the biology of ants.

Professor Picard was entertained by Professor Story, Professor Boltzmann by Professor Webster, Professor Mosso by Dr. Hall, and Professor Forel by Dr. Meyer. The social functions were an evening visit to the Worcester boat-house at the lake, the reception to about six hundred friends and Worcester residents at the University, and the reception to those attending the lectures by Dr. Hall.

A public exercise at which scores of congratulatory letters from foreign and other scientific and public men were read; a decennial address by President Hall was given; and the honorary degree of LL. D. was given to each of the five foreign visitors all of whom responded in brief addresses.

All the scientific lectures by the visitors; histories of the work and plans of the departments by each professor; a general historical sketch of the University; the congratulatory messages; the report of the librarian and treasurer; with full page portraits of the foreign visitors; with the names and titles of publications of all members of the University during the decade, are now published in an elegant volume of 566 pages, edited by Professor William E. Story and Librarian Louis N. Wilson, copies of which can now be had for $5 by addressing the latter.

BOOKS RECEIVED.

BARSS, JOHN EDMUND. Cornelius Nepos twenty lives. (Macmillan's Latin series) The Macmillan Co., N. Y., 1900. pp. 316. Price, 90 cts.

BLAISDELL, ETTA A. and MARY F. Child Life in Many Lands. A Third Reader. The Macmillan Co., 1900. pp. 192. Price, 36 cts. Child Life in Literature. A Fourth Reader. The Macmillan Co., N. Y., 1900. pp. 240. Price, 36 cts.

BOSANQUET, BERNARD. The Education of the Young in the Republic of Plato. (The Cambridge Series for Schools and Training Colleges.) The Macmillan Co., N. Y., 1900. pp. 198.

BUCKINGHAM, EDGAR. An outline of the theory of thermodynamics. The Macmillan Co., N. Y., 1900. pp. 205. Price, $1.90.

BURRAGE, SEVERANCE and BAILEY, HENRY T. School Sanitation and Decoration. A practical study of health and beauty in their relations to the public schools. D. C. Heath & Co., Boston, 1900. pp. 191. Price, $1.50.

BUTLER, NICHOLAS M. (Editor.) Education in the United States. A series of monographs prepared for the United States exhibit at the Paris Exposition, 1900. J. B. Lyon Co., Albany, N. Y., 1900. 2 vols. pp. 1-464 e; 465-977. Price, $3.50.

CHANNING, EDWARD. A short history of the U. S. The Macmillan Co., N. Y., 1900. pp. 401.

COLEGROVE, F. W. Memory; an inductive study. With an introduction by G. Stanley Hall. Henry Holt & Co., N. Y., 1900. pp. 369. Price, $1.50.

CRAWSHAW, W. H. Literary Interpretation of Life. The Macmillan Co., N. Y., 1900. pp. 266. Price, $1.00.

DAVENPORT, C. B. and G. C. Introduction to Zoölogy. A guide to the study of animals for the use of secondary schools. The Macmillan Co., N. Y., 1900. pp. 412. Price, $1.10.

DAVIS, WILLIAM STEARNS. A Friend of Cæsar. A Tale of the Fall of the Roman Republic. The Macmillan Co., N. Y., 1900. pp. 501. Price, $1.50.

ELSON, HENRY W. Side Lights on American History. Series II. The Civil War and Our Own Times. The Macmillan Co., N. Y., 1900. pp. 410. Price, 75 cts.

ELY, RICHARD T. Outlines of Economics. The Macmillan Co., N. Y., 1900. pp. 432. Price, $1.25.

FITCH, SIR JOSHUA. Educational Aims and Methods. Lectures and addresses. The Macmillan Co., N. Y., 1900. pp. 448. Price, $1.25.

HILL, ALEX. H. Introduction to Science. (Temple Primers.) The Macmillan Co., N. Y., 1900. pp. 140. Price, 40 cts.

HOOPER, J. W. Three score and ten. In retrospect. I. Boyhood days. II. Reminiscences of school experiences from twenty to seventy-two. C. W. Bardeen, Syracuse, N. Y., 1900. pp. 80. Price, $1.00.

JENKS, EDWARD. A history of politics. (The Temple Primers.) The Macmillan Co., N. Y., 1900. pp. 174. Price, 40 cts.

LEE, GUY CARLETON. Historical Jurisprudence. An introduction to the systematic study of the development of law. The Macmillan Co., N. Y., 1900. pp 517. Price, $3.00.

OPPENHEIM, NATHAN. The Care of the Child in Health. The Macmillan Co., N. Y., 1900. pp. 308. Price, $1.50.

SEARS, EDMUND HAMILTON. An Outline of Political Growth in the Nineteenth Century. The Macmillan Co., N. Y., 1900. pp. 616.

SWEET, HENRY. The History of Language. (The Temple Primers.) The Macmillan Co., N. Y., 1900. pp. 154. Price, 40 cts.

TARR, RALPH S. and MCMURRAY, FRANK M. Tarr and McMurray Geographies. Second Book—North America. With an especially full treatment of the United States and its dependencies. The Macmillan Co., N. Y., 1900. pp. 469. Price, 75 cts.

WILSON, L. L. W. Domestic Science in Grammar Grades. A Reader. The Macmillan Co., N. Y., 1900. pp. 193. Price, 60 cts.

THE

PEDAGOGICAL SEMINARY.

Founded and Edited by G. STANLEY HALL.

VOL. VII. OCTOBER, 1900. No. 3.

EDITORIAL.

Dr. Forbush presents the results of a wide experience and observation in organizing boys' clubs. In Boston and elsewhere he has done very valuable organizing work, for which he has a veritable genius. While he has put himself well abreast of the latest special literature bearing upon the subject, his article is essentially practical and cannot fail to be of great service to all interested in this work whether from the religious, social, or pedagogical point of view.

It is an interesting and much discussed question what the pedagogical value of myth really is for children. Dr. Chamberlain, whose valuable new book is elsewhere reviewed in this number, has given us a luminous account of the present condition of this problem in the German schools.

It has long been a desideratum to have the large body of child study material carefully gone over to see if there was already a consensus of opinion large and broad enough to be made the practical bases of education. For years there has been great demand for this work to be undertaken, but the time was hardly ripe. Now, however, the vast mass of material begins to reveal definite and unmistakable conclusions. Although the work of drawing these and of rightly evaluating all the items is a vast one, which may well transcend the powers of any one man, the attempt to do so is here made by an experienced mind, well poised, and safe from a conservative standpoint, but thoroughly progressive and carefully informed in the new child study. The Editor considers that the first effort to sugar off the practical results of this copious literature could hardly have fallen into better hands and especially commends Mr. Bryan's article to the thoughtful perusal of all school men.

Mr. Guillet spent several years at Clark University in the attempt to make a very concise digest of all the valuable literature upon animal instinct and to group this matter according to the ascending stages of evolution. The work itself, now nearly or quite completed, will make a volume, but Mr. Guillet seeks in this paper to summarize his leading conclusions for the benefit of educators and gives us an interesting and suggestive article.

The usual literature, book notes, and news follow.

THE SOCIAL PEDAGOGY OF BOYHOOD.

By WILLIAM BYRON FORBUSH, PH. D.

There is a time when a boy emerges from the narrow bounds of the school and the home, and seeks the larger social world of the street and the "gang." The instinct is legitimate and masterful and full of possibilities of danger or help. Its recognition is recent and literature upon it is slight. It constitutes the most pressing problem of adolescence.

The solution of the problem may be sought from three sources: from a study of boy-life, from a study of the ways in which children spontaneously organize socially, and from a study of the ways adults organize for the benefit of boys. Such studies are the contents of the first three chapters. The fourth and last is a summary of conclusions.

I.

BOY-LIFE.

The boy becomes a social being by development. It seems necessary to gather and summarize the results of child study which show how that development is made.

The birth of a boy is not his beginning. The pre-natal child passes up through every grade of animal life from the simplest and lowest to the highest and most complex. After birth he continues his evolution, in which he has already repeated the history of the animal world, by repeating the history of his own race-life from savagery unto civilization.

The period of a boy's life is roughly divided as follows: infancy, from birth to seven; childhood, from seven to twelve; adolescence, from twelve to manhood.

Physically, infancy is characterized by the most restless activity. Mentally, the infant boy appears to consist mostly of a bundle of instincts. Of these the simpler ones of grasping, locomotion, curiosity, etc., are means of self-education, but the most marked is imitation. "These instincts are implanted for the sake of giving rise to habits. This purpose accomplished, the instincts, as such, fade away." The most important task at this period is, by the imitation of correct models to evolve the great habit of obedience. Neither children nor cities should be allowed to grow up before they are governed.

Childhood is marked by less violent but more self-directed physical activity, the development of the higher instincts rather than those of a merely animal quality, and the emergence of the memory, the emotions, the imagination and the self-consciousness. This period is a continuation of the first rather than the introduction to the third. These first two form that age of immaturity and dependence, longer than that granted to any other of the animal order, given to childhood for its protection and preparation in the home and the school for the larger tasks of social and independent manhood. The instinct which is most prominent in this period is the play-instinct. It is both expression and means of education. It expresses the awakening instincts, and so teaches us what the child's nature is. It is the natural way by which the child finds out things. The child's manner of play is distinctive. The infant plays alone, by creeping, shaking, fondling, etc., developing the simpler instincts through curiosity and experiment. The boy-child begins to imagine and to personify in his games, and wishes often to play with others. But that this social instinct is as yet incomplete is shown by the fact that in games it is each one for himself, the team-work so admirable among young men is entirely lacking, and even in playing team-games each player seeks his own glory, and repeatedly sacrifices the welfare of the team to himself. To take advantage of this play-instinct, which enfolds in itself so many other instincts, is the newest problem in education.

During these two periods the boy has been changing from a bundle of instincts to a bundle of habits. The trails are becoming well travelled roads. Boyhood is the time for forming habits, as adolescence is the time for shaping ideas. This is the era for conscience-building, as the later is the era for will-training. Politeness, moral conduct, and even religious observance may now be made so much a matter of course that they will never seem foreign.

One reason why this is true is because verbal memory is more acute than at any other period. "The best period for learning a foreign language ends before fourteen." This power of absorption forms the characteristic of this second period. Our duty now is to feed the child. The boy can absorb more nutriment and also more information, more helpful or hurtful facts, more proverbs of wisdom, more Scripture and hymns, for future use, than ever again in his life. In this absorptive rather than an originative quality is the strong distinction between this period and that which follows.

The boy of this age is not mere animal. His emotional instincts are growing. And of these love is one of the deepest and one of the first. Love for mother, for teacher, for some older friend who is an ideal, love for truth which is so startling in the unperverted child, love for God and good things as He and they are understood, these are all characteristic of the warm-hearted days of boyhood.

In summary, we may call this the Old Testament era of the boy's life. The Bible, that marvellous manual of pedagogy, has been thought to reflect in either Testament childhood and adolescence. "The key of the Old Testament," says Sheldon, "is obedience." This we have said is the key to childhood. The law must come before the gospel, the era of nature before the era of grace. Those old heroes were only great big boys, and it is an underlying sympathy with them which explains why boys of this age prefer the Old Testament to the New. There are sound reasons why it should first be taught them.

Especially in religious ideas are boys under twelve much like the ancients. Many times they actually pass through the stages of religion passed through by primitive peoples, namely, nature worship, mythology, fetishistic superstition. The contents of many a boy's mind and pocket reveal a recourse to charms, incantations and anthropomorphisms. At the best the God of one's childhood is but a great man, and it is a solemnizing fact that He often bears the face and nature of the child's own earthly father.

Adolescence is bounded at the beginning by approaching puberty, and at the end by complete manhood. The so-called American boy, who was really a Persian in his love of war, or an Athenian each day telling or hearing some new thing, or a Hindu in his dreams or a Hebrew in his business sense, is coming down through the millenniums, and has reached the days of Bayard and Siegfried and Launcelot.

It is the time of change. By fifteen the brain stops growing, the large arteries increase one-third, the temperature rises one degree, the reproductive organs have functioned, the voice deepens, the stature grows by bounds, and the body needs more sleep and food than ever before. It is the emotional age. No songs are too gay, no sorrows ever so tearful. It is the time for slang, because no words in any dictionary can possibly express all that crowds to utterance. It is the time for falling in love most thoughtlessly and most unselfishly. The child wants to be entertained constantly. This is a natural condition. "It is as necessary to develop the blood-vessels of a boy as crying is those of a baby." It is the enthusiastic age.

It is a time of intense intellectual curiosity. Now is when boys want to roam and to run away to sea. They are simply seeking their place in the world. It is the time of stubborn doubts. As Gulick says, the boy "is a skeptic and a partisan at the same time."

This widening of interests, emotional and intellectual, is accompanied by a sudden social broadening. Adolescence has been called an unselfing. There comes both a clearer recognition of one's self and a finer recognition of others. There is a yearning to be with and for one's kind. This is seen in the growing team-work spirit in games, in the various clubs which now spring up almost spontaneously, in the slowly increasing interest in social gatherings and in the other sex.

This is also a time of moral activity and ideals. "A new dimension, that of depth, is being added." No boy, no matter what he may seem, is at this time careless of life's questions. Many on conversion at this age are eager to exercise their social consciousness by becoming ministers or missionaries or heroes.

But the peculiarity of this period that most attracts attention is that of crisis. It seems to be well proven that there comes a time in the adolescence of almost every boy and girl when the various physical and moral influences of the life bear down to a point of depression, and then rise suddenly in an ascending curve carrying with them a new life. There is first a lull, then a storm, then peace, what results is not boy but man. This crisis, in religious matters, is called conversion, but is by no means confined to or peculiar to religious change. "It is," says Dr. Hall, "a natural regeneration." If the Hughlings-Jackson three-level theory of the brain be true, there is at this time a final and complete transfer of the central powers of the brain from the lower levels of instinct and motor power to the higher levels. "It is," says Lancaster, "the focal point of all psychology." Dr. Starbuck's careful though diffusive study shows that this change is apt to come in a great wave at about 15 or 16, preceded by a lesser wave at about 12, and followed by another at about 17 or 18. It consists in a coming out from the little, dependent, irresponsible, animal self into the larger, independent, responsible, outreaching and upreaching moral life of manhood.

Next to the physical birth-hour this hour of psychical birth is most critical. For "at this formative stage"—I quote from the Committee on Secondary Education—"an active fermentation occurs that may give wine or vinegar." "This," says President Hall, "is the day of grace that must not be sinned away."

We are evidently approaching the end of the plastic period. The instincts have all been given. The habits are pretty well formed. There is plenty of time to grow, but not much to begin. Now the father looks one day into the eyes of what he thought was his little boy and sees looking out the unaccustomed and free spirit of a young and unconquerable personality. Some mad parents take this time to begin that charming task of "breaking the child's will," which consists mostly in breaking his back. But when a boy gets too big to be licked he is too big to be mentally or morally coerced.

As to the boy who has now come into view, we hesitate whether more to be afraid of him or to be alarmed for him. He has such a capacity for crazy plans and harmful deeds. It is some relief to remember that these dangerous manifestations are as temporary as the caperings and rushings of an untamed colt.

Our last glimpse of this conservatory of young life shows us the habits full-grown and the instincts budding successively into fresh ones. These buddings or "nascencies" I will refer to again. Here is a heap of knowledge, much of it undigested and some of it false. Here, too, if he has passed the crisis I spoke of, is the little new plant of faith. There was a faith which he had before which he borrowed from his mother, but a man cannot live his whole life long on a borrowed faith. It is new, it is little, but it is his own, and it is growing. But here is something strange. Strong, vigorous, fearful at first and afterward dangerous looking; here is a plant that has suddenly taken root and grown bigger than all. It is the Will. That is what all this storm and stress means. This is what is born in the emergence from the dependent to the independent being. Shall we pull it up and throw it away? What! and leave him a weakling child through life? Shall we bind it down? What! and maim him forever? Let it grow; but let it grow properly. This Will is dangerous but needful. You can't have births without some risks. If this boy is ever to be a man, it will all depend on what is done with his Will.

Social pedagogy in dealing with a being who is now coming to have a social nature pays its first and chief attention to will-training. For there is no more important, more neglected subject. It is an art, as one tersely says "which has no text-book and of which it is impossible to write one."

The public school fails in will-training because it gives the will no exercise. "Our schools," says William I. Crane, "permit us to think what is good but not to do what is good." The home, especially the city home, fails for the same reason. The child's attention has been shared by a thousand sights, nothing holds him long, and he cannot find ways to use his instincts actively. The church fails, because it has tried the wrong thing: it has taught the children to examine their spiritual interiors and to sing "Draw me nearer till my will is lost in thine" and not to hallow their wills, as Phillips Brooks wisely said, "by filling them with more and more life, by making them so wise that they shall spend their strength in goodness."

General Francis A. Walker was the first to show just what the country did for the boy. He used the simple illustration of the squirrel seen on the way from school, the trap designed and built for his capture and the successful result. There was a single keen interest, a natural instinct awakened, that instinct exercised by a voluntary muscular effort carrying an originative task to completion: result, not merely a captured squirrel but strengthened will power. Johnson, our authority on play, says: "There are no really good men without strong wills, there are no strong wills without trained muscles. We learn to do by doing. We learn to will by willing."

With this hint social pedagogy goes to work. "You can only get a purchase on another's will," James says, "by touching his actual or potential self." Hall says, "Will is only a form of interest." We trained the boy's conscience, his passive self, by filling his mind with rules, but we can train his will, his active self, only by interesting and making active his instincts. Lancaster says, "The pedagogy of adolescence may be summed up in one sentence, Inspire enthusiastic activity." I spoke of the "nascencies" of instinct. Every little while an instinct pops up in a boy's mind and feebly feels for utterance. If it is not noticed it sinks back again to rest or it becomes perverted. All boys have the constructive instinct. If it is neglected it either fades away or becomes the destructive instinct. Some wise man sets the boy to whittling or modelling and the instinct becomes an ardent interest. Such happy alertness, thinks Mosso, was the encouragement that made a Raphael and a Da Vinci. It will satisfy us if it gives our boys the good instead of the evil will.

It is also a curious fact that a multiplicity of interests just at this time multiplies rather than diminishes the power of acquisition. Thus social pedagogy may use many instrumentalities to encourage the interested and self-directed activities of boys in maturing their wills into principle and character.

The results of this chapter suggest that the last nascencies of the instincts, the completion of the habits, the psychical crisis and the infancy of the will, all coincident with the birth of the social nature, together form a period of danger and possibility in boy life. For helping this age, social pedagogy, the combination of educative forces in a social direction, is a new and most important science.

II.

Ways in which Boys Spontaneously Organize Socially.

The interests of infancy are all in the home. This is the parent's unhampered opportunity. During boyhood the home shares with school the boy's time. But with the development of his social instinct by means of play new acquaintanceships begin to share the crevices of his time. First he plays at home with a chosen companion or two, then he ventures forth to the ball field and the swimming hole with a larger group, finally his journeys are farther, his stay is longer, the group is more thoroughly organized and a mob spirit is apt to arise which passes from unorganized play and sportive frolic to barbarous and destructive deviltry, and we have, in city and country, the fully developed "gang." Ofttimes the watchful parent can prevent the evolution from becoming complete and may redeem and transform its energies, but the fact that this is not everywhere being done gives room for new and vigorous forms of educative philanthropy.

Convincing proofs that this social instinct craves development as much as that of adult man, and suggestive indications of the ways in which it turns and may best be turned are seen in a study of those interesting organizations which boys themselves spontaneously create. Dr. Henry D. Sheldon's questionnaire as to the spontaneous institutional activities of American children furnishes me my figures; but I have arranged them to bear simply upon the point we are considering, adolescent boyhood. How general the expression of this social instinct is is seen in the fact that of 1,034 responses of boys from 10 to 16, 851 were members of such societies. This did not include societies formed for boys by elders, and it did include many boys who from isolation never had the slightest chance for such society-making.

The study of the societies which children spontaneously form ought to be more suggestive than that of those which elders in their adult wisdom or ignorance form for them. If will is only interest, interest should be the best criterion of how to help the will. From 1,022 papers collected there were reported 862 societies, 64 boys belonged to more than one society. The ages were 10 to 17. Of 623 societies, fully described—

Those having secrets numbered 23 or 3½%.

Social clubs (for "good times") numbered 28 or 4¼%.

Industrial organizations numbered 56 or 8½%.

Philanthropic associations numbered 10 or 1½%.

Literary, art, and musical clubs numbered 28 or 4¼%.

Predatory societies (migratory, building, hunting, fighting, preying) numbered 105 or 17%.

Athletic and game clubs numbered 379 or 61%.

The ages 11, 12, and 13 were the ages of the largest number of societies formed, the numbers being: at 8 28, at 9 44, at 10 118, at 11 155, at 12 164, at 13 188, at 14 90, at 15 80, at 16 34, at 17 11.

We notice the following facts:

1. The period of greatest activity of these societies is between 10 and 15, over 87% being formed during that period, only 7% before 10, and only 1% being formed at 17. This is accounted for by the growth of the social disposition with adolescence and, in a lesser degree, by the fact that some of the earlier societies persisted later, and by the fact that in later years the church and school societies formed by elders take the place of many voluntary societies.

2. Physical activity is the keynote of these societies at all ages. The predatory and athletic societies number 77%. Add to these the industrial and we have 85½% of the whole.

3. The literary, art, and musical interests are very small, while the philanthropic and religious are infinitesimal.

4. The interest in athletic societies increases by leaps from 8 to 13, and then diminishes with even greater rapidity toward the end, while the interest in literary societies, though never very large, increases with increasing maturity. The predatory societies are at their highest at 11, and thence gradually disappear.

The boys' societies are largely summer societies. Had the figures been so classified as to show this accurately we should perhaps find that the literary and philanthropic features do really have some importance in the months when outdoor activity is restrained. With this limitation recognized, we must still believe that physical activity is the interest central throughout the year.

5. Girls and boys do not naturally organize together. Dr. Sheldon's paper shows that the interests of boys and girls in their societies are nowhere parallel. Girls form three times as many secret societies as boys, five times as many social societies, three times as many industrial, twice as many philanthropic, and three times as many literary, while the boys form four times as many predatory and seven times as many athletic societies as the girls. Physical activity was the feature in 10% of the girls' as against 77% of the boys' societies. 384 girls as against 257 boys were found in societies formed for children by adults. "Girls are more nearly governed by adult motives than boys. They organize to promote sociability, to advance their interests, to improve themselves and others. Boys are nearly primitive man: they associate to hunt, fish, roam, fight, and to contest physical superiority with each other."

If these facts mean anything in the way of instruction, they mean this:

1. Boys should be sought just before their own social development tends to become dangerous, at about 10, and held until the organizing craze is over and the years of adolescence are

well past. Dr. Sheldon found 257 boys in societies formed for them by adults, of whom all but 40 were from 10 to 15, but only 7 of whom were beyond 15. Is it not almost more dangerous to hold a boy till the most critical year of his life and then let him go than not to touch him at all?

2. Physical activity must be made the basis of social work for boys, if it is to reach and hold their natural interests. Other things may be accepted or endured by them, but this is what they care for. A contact which begins with athletics, walks, physical development and manual training may ripen into the literary, the scientific, the ethical and the religious influences. But it would seem wise to utilize the ruder instincts which are on the surface before reaching down to the deeper ones.

3. Wherever possible, girls and boys should be organized separately. They are not yet interested in the same things nor in each other. The boys should have male or at least virile leaders. The ideals and capabilities of most women leaders do not point to the highest efficiency with boys of the adolescent period, while a manly man with some slight athletic prowess, a willingness to answer questions and patience to guide by adaptability rather than by domineering, can do almost anything with a group of boys.

III.

Social Organizations Formed for Boys by Adults.

As detailed descriptions of the many methods that are being used to help boys are found in the literature of the different movements, it seems sufficient to give the briefest analysis of their worth, with a fuller discussion of plans that are especially suggestive. For this analysis I have devised a system of rubrics suggested by a table in Mr. George E. Johnson's "Education through Plays." The rubrics are as follows:

I. Age to which the method is in its present form appropriate, indicated by numbers from 10 to 17.

II. Number of boys to which the method applies, indicated by numbers.

III. The Instincts made use of, the emphasis—small, moderate or large—being indicated by increasing sizes of type, as acq, *acq*, ACQ:

acq–acquisitiveness, the collecting and appropriating instinct
chs–chastity
cln–cleanliness
con–constructiveness
cur–curiosity, desire to find out
drm–dramatic instinct, desire to personify, imaginative imitativeness

eml–emulativeness
img–imaginativeness
imt–imitativeness
love
loy–loyalty, the mixed instinct of love, proprietorship and responsibility (as felt in the college fraternity)
phy–physical activity
play
pug–pugnacity, the desire to overcome
soc–sociability, the desire to be with others as distinct from the love-instinct, which involves the desire to serve.

IV. Kind of education afforded, indicated by letters, the amount shown by increasing sizes of type, as p, *p*, and P.

p–physical (bodily strength)
ath–athletic (bodily agility)
m–manual (mastery of hand)
i–industrial (mastery of trade)
c–civic
l–literary
art–artistic (including dramatic, literary and pictorial)
s–scientific
alt–altruistic (social and philanthropic)
e–ethical
r–religious.

V. Part of the boy trained, the value of the training indicated by sizes of type as before:

b–body
i–intellect
f–feelings
w–will
r–religious nature.

VI. An estimate of the proportion of the boy's interests excited (with the presumption of a possible maximum of 50 in 100), the amount indicated in numbers meaning per cents.

This analysis is based on the belief that, no matter what the announced aim of any form of help, the problem is one, namely that of manhood-making. So, while the list is classified by certain general characteristics, each plan is measured by its applicability to the entire boy.

NOTES.

a. Discussed at length later.

b. A plan that has been popular and that, with other features, is often useful. The difficulties are the getting of a good drill master who is anything more, the expense, the monotony of drill, the jealousy for office, and the development of drill in the public schools.

c. Devised by Charles W. Birtwell of the Boston Children's Aid Society.

CHART

NAME AND KIND OF ORGANIZATION.	AGE.	NO. BOYS.	INSTINCTS UTILIZED.	KIND OF EDUCATION.	PART DEVELOPED.	% OF INTERESTS.
I. Physical Training Methods.						
Boys' Branch, Y. M. C. A. *a*	10-17	50-300	CHS, CLN, EML, *imt*, *love*, loy, PHY, PLAY, PUG, SOC	P, ATH, m, i, c, l, alt, *e*, *r*	B, i, f, w, *r*	25
Summer Camps (and Vacation Schools) *a*	12-17	6-40	acq, *chs*, CLN, *con*, *cur*, EML, *imt*, *love*, loy, PHY, PLAY, PUG, SOC	P, ATH, *m*, *i*, s, *e*, *r* (?)	B, i, f, W, *r* (?)	25
The Boys' Brigade *b*	10-17	20-50	chs, CLN, EML, IMT, loy, PHY, PUG, *soc*	ATH, *c*, l, alt, *e*, *r*	*b*, r	10
II. Manual Training Methods.						
The Play-School *a* (Johnson's)	10-17	10-40	ACQ, chs, *cln*, CON, CUR, drm, EML, IMT, love, *loy*, PHY, PLAY, PUG, SOC	P, ATH, M, *i*, *c*, *l*, *art*, S, p, *e*	B, I, *f*, W	40
The Play-Work Guild *a* (Clark's)	10-17	8-10	*acq*, *cln*, CON, CUR, drm, EML, IMT, *love*, LOY, PHY, PLAY, PUG, *soc*	*p*, *ath*, *m*, i, *c*, *l*, *art*, S, p, *e*	B, I, *f*. W	35
The Captains of Ten *a*	10-14	10-50	ACQ, *cln*, CON, CUR, drm, EML, img, IMT, LOVE, LOY, PHY, PLAY, PUG, SOC	*p*, ath, *m*, l, c, *l*, art, s, ALT, *e*, R	*b*, *i*, F, W, R	40
III. Literary Methods.						
Debating Clubs, Lyceums, School Societies	14-17	20-100	*cur*, drm, EML, *imt*, loy, PUG, *soc*	C, *l*, art, s, alt, *e*	I, f, w	10
The Home Library System *a c*	10-17	4-10	CLN, *cur*, IMT, LOVE, LOY, PLAY, *pug*, *soc*	c, L, ART, S, *e*, r (?)	I, F, w, r (?)	20
IV. Social Methods.						
The Mass (big) Clubs *a*	10-16	100-3000	chs, CLN, *con*, cur, drm, EML, imt, love, loy, PHY, PLAY, PUG, SOC	P, ATH, man, i, c, l, art, s, e	B, i, f, *w*	30
The Group (small) Clubs, see Play-School and Play-Work Guild						

CHART—continued.

NAME AND KIND OF ORGANIZATION.	AGE.	NO. BOYS.	INSTINCTS UTILIZED.	KIND OF EDUCATION.	PART DEVELOPED.	% OF INTERESTS.
V. Civic and Patriotic Methods.						
The City-History Clubs *d*	14-17	10-50	cln, *cur*, *soc*	C, *l*, *alt*, *e*	I, F, w	20
The Gill School City *e*	14-17	10-75	CUR, *drm*, EML, img, *loy*, play, PUG, *soc*	C, *l*, *alt*, *e*	I, F, w	20
The George Junior Republic *f*	10-17	40-100	cln, con, *cur*, DRM, EML, img, *imt*, love, LOY, PHY, *play*, PUG, SOC	C, P, ath, m, l, S, *l*, alt, e, *r*	B, *i*, f, W, r	30
Juvenile Leagues, Street Cleaning	10-17	1-1000	CLN, eml, *imt*, loy, phy	C, e	F, w	5
Sons of the Revolution, and other genealogical and patriotic clubs	10-17	20-40	cln, cur, img, IMT, love, loy, soc	C, *l*, alt, e	*i*, F	20
VI. Science Study Methods.						
The Agassiz Association (nature study)	12-17	4-40	ACQ, con, CUR, *eml*, *imt*, loy, *phy*, *pug*, *soc*	p, m, S, e	*b*, I, *f*, w	20
VII. Hero Love Methods.						
The Knights of King Arthur *a*	12-17	20-40	CHS, cln, *con*, CUR, DRM, EML, IMG, IMT, LOVE, LOY, PHY, *play*, pug, SOC	p, m, C, l, art, ALT, E, R	b, *i*, F, *w*, R	30
Hero Scrap Books, Record of Virtue Contests, etc.	10-17	4-200	ACQ, *cur*, EML, pug	m, C, *l*, *art*, E	*i*, F, w	10
VIII. Ethical Methods.						
Mercy, The Band of Mercy and the Animal Protective League	10-14	10-50	LOVE	*alt*, *e*	F	5
Purity. The Knights of the White Cross, Loyal Temperance Legion, etc.	10-17	10-50	CHS, *cln*, cur, pug, *soc*	E, r	i, F, w, r	5
Temperance. The Band of Hope, Good Templars, and all open and secret children's temperance societies (including the L. T. L.)	12-17	20-75	chs, cln, *cur*, DRM, loy, play, *soc*	c, *l*, alt, E, r	i, F, w, r	5
Saving. The Stamp Saving Society, etc.	10-17	1-1000	ACQ, eml			

CHART—concluded.

NAME AND KIND OF ORGANIZATION.	AGE.	NO. BOYS.	INSTINCTS UTILIZED.	KIND OF EDUCATION.	PART DEVELOPED.	% OF INTERESTS.
IX. Religious Methods.						
Junior Brotherhoods of St. Andrew, and of Andrew and Philip *a*	10-17	10-100	*chs*, cln, *eml*, IMT, LOVE, LOY, *phy*, play, SOC	p, *ath*, c, l, art, s, ALT, E, R	b, i, F, w, R	25
The King's Sons	10-14	10-40	*chs*, cln, eml, IMT, LOVE, loy, SOC	ALT, R	F, R,	10
The Junior or Intermediate Endeavor Society, Epworth League, etc. *a*	10-14	10-200	chs, cln, *eml*, IMT, LOVE, *loy*, play, pug, *soc*	ALT, *e*, R	i, F, w, R	15
Catechism Classes *a*	10-17	6-50	chs, cln, eml, imt, love, soc	alt, *e*, R	I, *f*, R	5
Missionary Bands *a*	10-14	20-50	cln, *cur*, *imt*, LOVE, loy, phy, soc	m, ALT, *r*	b, *i*, F, r	10
The Sunday School *a*	10-17	any no.	*cln*, *cur*, eml, LOVE, *loy*, *soc*	alt, *e*, R	I, F, w, R	10
The Church Service (including the Boy Choir, the sacraments, etc.)	10-17	any no.	*cln*, *cur*, IMG, LOVE, *loy*, soc	*art*, *alt*, *e*, R	I, F, w, R	10
Although not the subjects of special study, let us analyze for comparison the Home and the Public School *a*						
The Home	all	1-10	ACQ, chs, *cln*, CON, *cur*, *eml*, img, IMT, LOVE, LOY, PHY, PLAY, pug, soc	P, *m*, *i*, *alt*, E, R,	B, *i*, F, W, R	45
The School	3-18	10-50	acq, *cln*, CUR, EML, IMT, love, *loy*, PHY, play, PUG, *soc*	p, *ath*, *m*, *i*, *c*, L, art, S, alt, e	b, I, f, w	30

d. Founded by Frank Bergen Kelley, Ph.D., 19 W. 44 St., N. Y. Boys and girls. Some voluntary and some paid teachers. Talks on the city, discussions and business, with historic tours, prizes and emphasis on city pride and good government.

e. Designed by Wilson R. Gill, N. Y. City. The Junior Republic idea applied to the city and adaptable to public school clubs and lyceums.

f. A radical experiment, suggestive but dangerous, and destined to be of service in showing both what to do and not to do in reformatory and in club work.

I wish you would go over this table carefully, especially in the way of comparison. Note in the first column of figures which clubs are applicable to boys all the way along and which reach either only early or late boyhoood. In the next column see which clubs work on the group and which on the mass idea. In the column of "Instincts" note that of the 28 methods only 8 reach 10 of the 15 instincts named. See in how few are the athletic and play-instincts recognized at all. So in the next column see how few afford any athletic or physical training. You may disagree with the estimates in the last column, but it is graphic as showing how much a boy with all the instincts of a boy will be interested in the several plans. Some of the plans which show the largest per cents. are without the religious element. The home is counted as the educational institute that most interests the boy, its only imperfection at its best being that it does not afford the larger social fellowship. Nearly every plan has its one strong point, a few have several good ideals, some could easily be strengthened by imitation of others, and some would be worth while only as supplementary. This is true of all the civic and ethical methods, I think.

No one is "the best." The personality of the leader counts so much that many a plan that "works" in one place will not do in another, and such is the fickleness of the adolescent boy that no one plan is all inclusive. There is no patent way of saving boys.

The various methods which have been mentioned divide into two classes: those which have and those which have not the religious element. We have the methods used in churches and the methods used outside churches. Some will tell us that this division is also a caste line, and that the community clubs reach street boys while the church clubs reach only boys from good homes. I fear this is often true. The exact fact is that the community clubs in ignoring the religious element are able to reach Protestant, Romanist and Hebrew, which no single church can do. If one believes the community clubs are therein faulty he must also remember that they are more widely inclusive. The community clubs are by no means anti-religious, and are heartily willing to encourage their boys to supplement their club-life with church influences. The two types must be recognized, and each may well be more tolerant of the other. In the community clubs we study every form of pedagogy except the religious. In the church clubs religious pedagogy is central, and the other forms are usually subsidiary. The former propose to make good men, impelled by every true motive except the religious, which they leave the church to give. The latter propose to make good men, impelled by every true motive including the religious. Probably the community club can make the more boys good and the church club can make the fewer boys better.

Among the non-religious or "community clubs" we find two theories which seem to be radically different. The "mass clubs" (or, as they used to be called from their originator, the "Collins clubs"), have one, and the "group clubs" (usually in connection with social settlements), have the other. I think Mr. William A. Clark, the Head of Lincoln House, has fairly characterized them.

"The boys' club of twenty years ago was a very simple affair. The membership in such a club varied from 800 to 2,500. Any boy in the city could be admitted to the club. The workers consisted of a doorkeeper, librarian and superintendent. During the club session the superintendent was obliged to walk about the rooms as a moral policeman. Occasionally visitors from the various churches came to assist by playing games with the boys. Later a few industrial classes, such as carpentry, clay modeling, wood carving, cobbling, typesetting, etc., were added. A penny savings bank was a leading feature of this sort of club, and occasional entertainments. Finally, with this plan, it is possible to have an exceedingly large membership. This in itself is a strong feature in the minds of many. Large figures look prosperous in a report.

"With the advent of the university settlement a new plan of club came into being. During the past five years the majority of boys' clubs throughout the country are now being formed on what may be termed the settlement club plan or on some modification of it. It differs from the old plan radically, in that it is always very much smaller. The whole drift of boys' club organization for the past ten years has been toward smaller clubs. The most characteristic plan of a Settlement Boys' Club in brief is this: A group of boys, eight or ten, usually of the same gang, all coming from the *immediate* neighborhood. This neighborhood idea is, as you know, one of the basal principles of the settlement. Such a group usually meets once or twice a week in charge of a leader. The programme for the little club varies with the taste of the leader and the boys. The leader, as a rule, is a person of refinement.

"The legitimate aim of the large club is to keep as many boys as possible off the street, giving them a cheerful room with games and books. The aim of the settlement is to take a small group, and through a refined tactful leader 'with a social soul,' as one man expresses it, moralize these boys by the power of friendship. The superintendent of a club of 1,500, assuming that he is equally as well educated and refined as the settlement type of man, can only be a friend to these boys in theory. Friendship means knowledge. No man can know 1,500 boys. Most workers find it hard enough to know ten boys well.

"And yet the *esprit de corps* of 100 boys, for instance, is different from the *esprit de corps* of a group of ten. Personally I believe that the group idea and the mass idea should be combined in the plan of the club. The old type of club has features of strength which should not be lost in the new plan."

Thus far the group clubs seem to have the advantage. They are further strong in that the boy's club is often one of an ascending group of clubs, embracing the whole family and giving a place into which the boy may graduate. In thoroughness, comprehensiveness and the power of personality the group club is a model social instrument.

The mass club, however, is open every night to every boy. To keep a boy off the street every night in the week is what the mass clubs actually do. "If we can only keep the boy where he can be found when he is wanted," says Thomas Chew, "we are doing a good deal." As far as they see their lack of individual workers who will divide the mass into groups as in the group clubs and as far as they succeed in getting such workers, they can emulate the college settlements. The fact is that no mass club director deals with boys in the mass because he likes to. And it is true that many a group club leader sighs for the splendid *esprit de corps* of the larger club, where the boys never feel that they are being patronized and really believe that they own the whole building. When the director lives with his family in the building and adds to the advantages of the winter a club farm, excursions and a vacation school in summer and is alert for new ideas, such a club with such a leader may be counted one of the great benevolences of a city. Clubs of both classes are a present day necessity. Says Frank S. Mason, who brought into being the Bunker Hill Boys' Club:

"The experience of the past twenty years of boys' club work has demonstrated that the boys' club is a necessity in the social structure, especially in large cities and crowded communities. It is a true and trite saying that a good home is a better place for a boy at night than a boys' club. If all homes were perfect homes, then would the boys' club be useless; if it were possible to reform many homes, it would not be necessary to form boys' clubs; if it were possible for public school teachers to stand in the same relation to their classes as does the director to the members of his club, there would be no need of boys' clubs; could the churches be inspired to do this kind of work, and do it with the breadth with which it is done in the boys' club, the boys' club would have no existence. It is therefore in my mind, an important, but not the only means of reaching the boy, and it, as well as other possible means, should be pushed to the utmost in every city and town in the country.''

Among all the methods without the definite religious aim that of George E. Johnson, Superintendent of Public Schools in Andover, Mass., is the most thoughtful, the most carefully based on the results of child study, and the most practically suggestive to those who would help boys. It was called the Play School. It is based upon the play-instinct, with all the other allied instincts of which play is the expression. Its purpose is to utilize these neglected instincts in education and much is made of will-training. Mr. Johnson describes the plan as follows in the *Pedagogical Seminary*.

> ''It is a school for boys ranging from ten to fourteen years of age. Its sessions have been evening sessions in the winter and day sessions during the summer vacation. The work of the school has been based entirely upon the play interests of the boys attending. The work has varied somewhat according to the season of the year, but the description will concern mainly the work of the summer sessions.
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> ''The school was in session for six weeks during July and August, the school day was from half past eight to twelve, and forty boys were regularly in attendance. There were three periods in the school day the first and third being one hour and a half in length and the second one hour. A free choice of occupation was granted at the beginning of the term, very little occasion for change in the divisions occurring thereafter.
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> ''Perhaps the favorite occupation, on the whole, was the wood-work. There was a complete sloyd outfit and a trained sloyd teacher. No attempt was made to hold the boys to a formulated course. The wood-work was to serve as sort of a supply shop for the apparatus used in the school. The boys made their own butterfly nets and fish nets for the nature work. They made the mounting boards used in mounting the specimens, the cases for the permanent collections, developing cages for the caterpillars, aquaria for the fishes, box traps for catching squirrels, etc. If a boy was interested in archery, he made his bow and arrows; if in cricket, a bat; if in kite flying, a kite; if in making a present for a younger brother or sister, a toy table perhaps. Mothers, too, reaped the benefits of the shop; for a boy often turned from his toy making to the making of a sleeve-board, ironing board, bread board, shelf, or something else for the house. Sometimes the boys united in making some giant affair of common interest; as, for example, a great windmill which supplied power for turning the grindstone, or a dam and sluiceway for the water-wheel, or a catamaran for the swimming pond.
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> ''The nature work was hardly less popular than the toy-making. Nearly every morning there might have been seen a company of ten or a dozen boys starting out with the leader in search of butterflies or

fishes, and for the incidental study of birds, or frogs, or snakes, or whatever came to their notice while hunting. The older boys devoted themselves mainly to the butterflies, the younger to the fishes. Nearly every species of butterfly to be found in Andover during the season was captured, many kinds of caterpillars taken and developed into chrysalides in the cages, and nearly all the different kinds of fishes to be found in the streams and ponds of Andover were caught and studied. The work consisted largely of outdoor tramps, but there was also laboratory work, the description and drawing of the worm, chrysalis, and butterfly. Honey bees in an observation hive, and ants in nests made of school slates covered with glass were watched. Some of the ants' nests were successfully kept and watched for months, one boy keeping a colony all winter. The microscope was frequently used in the laboratory work. Note books on fishes were also kept. The interest of the boys was deepest in the gathering and general observation and naming of specimens, the watching and feeding of the fishes, and less in the minuter observation, drawing and naming of parts. The zeal in the hunting of specimens was often intense.

"Allied to the nature work, was the gardening. A part of the school yard was plowed and a definite portion allotted to each boy who chose gardening. Vegetables of various kinds were planted. Last year flower plants were also a part of the care and possession of the boys, and were taken home and transplanted by the boys at the close of the school. The following spring, many of these boys were reported to me as having started gardens of their own at home.

"In the winter session stamp and picture collections were substituted for the nature collections, the stamp-collecting craze spreading like wild fire among the school children last winter, some of the candy and cigarette counters suffering thereby to my certain knowledge.

"The second period of the day, one hour in length, was spent in outdoor play. In one section of the playground might have been seen a group of boys engaged in a match at archery. In another section, the older boys, perhaps, divided into opposing sides by some natural grouping which lent zest to emulation, were hard at a spirited game of ball. Elsewhere some of the younger or less athletic boys were playing at tenpins on the smooth drive-way, or at bean bags. There were also at times, foot-ball, basket-ball, ring-toss, tag games, boxing, wrestling, racing, jumping, vaulting, gymnastic tricks, kite-flying, boat racing at Rabbitt's Pond, swimming races at Pomp's or in the Shawsheen. Three times a week there was a division in swimming. The swimming lessons often served as a good opportunity for collecting specimens or plants for the aquaria. On rainy days there were indoor games, which partook more of the nature of social or parlor games and which were intellectual rather than physical.

"The musically inclined boys were always eager for an orchestra. This took the form of the kindersymphonie. The talents and attainments of the boys made the music necessarily crude, but it was much enjoyed by them. The violinists were children who came for the orchestra alone, the play school boys being confined mainly to time-beating instruments. There was a class also in piano playing which met twice a week.

"The printing department appealed to some as real play. The press served in printing the names of the boys in the several departments, the base ball teams, headings for school exercise papers, cards, some bill heads, and, best of all, a four-paged paper issued at the close of the last school, containing compositions by the boys on the work of the various departments, names of prize-takers, cuts of drawings made in the nature work, list of specimens captured, and the like.

"Besides the drawing in the nature work, there was a division in drawing for those who preferred it to any other occupation they might have during that period. The work took the form, mainly, of large free drawings from objects. This was the nearest allied to regular school work of any department, unless we except the library from which the boys eagerly drew books of stories, history or nature, for home reading."

I shall speak further of the Play School in the next chapter. I shall show that Mr. Johnson has provided a plan for carrying these boys on in further harmony with their development until maturity. Mr. Clark's Lincoln House clubs are an unconscious reaching out in this direction, the work of a single group, perhaps, being less varied and more thorough in a single direction.

In coming to the methods in which the religious element is present, we find that the Boys' Branch of the Young Men's Christian Association offers instructive likenesses to and contrast with the group and the mass clubs. The boys' department was an afterthought. I think it needs no prophet to declare that it is soon to become the important thing in Association work. The Association reaches the upper and middle classes of society. Its fees are prohibitory to poor boys. Although the men usually crowd the boys out of the building, the Associations generally have an almost model equipment for boys. The gymnasium in winter and the camp in summer reach and satisfy the instinct for physical activity. The game-room is often adequate, although organized play is hardly known. The department of manual training is not often open to boys. The Associations lack sufficient leaders for boys, but they are awaking to their need. The Association has the advantage of being able by its equipment to do what no single church can do, but it is less influential than the church in that the boy does not love it as he can the church. He usually feels that his fee squares his obligations and that the institution is one simply to get something out of. I would rather my boy would be converted in the church than in the Association. I would trust more the approach, the subsequent care and the product. At present the average Boys' Branch is not conducted so as to be as popular with boys as the mass club or so as to be as worthy of commendation for careful, thoughtful work as the group clubs.

The most popular way of helping boys in the church is by means of the Junior Endeavor Society and kindred organizations. We are to remember that we are not discussing the adult Endeavor movement, although, whatever its virtues, it strikes the psychologist with some surprise to note that its every feature has been transferred to its junior branch. Can it be possible is his instant query, that a plan of the utmost utility with persons from sixteen to forty can be completely adaptable to children (in the "junior" branch) from six to twelve and (in the "intermediate" branch) from twelve to sixteen?

This seems to be the chief trouble with the plan. It is a plan for grown up people. It is a society for sitting still, and boys do not like to sit still. Its meetings are based on the class meeting idea, and boys were never made to go to class meetings. Its membership is at least half girls, and, as we have seen, boys never spontaneously form such societies before they are fifteen or sixteen. It usually has women leaders, and this makes the maturing boy uneasy. It generally has in it children of all ages, and the clan-bounds of boys are very strict about equality of age.

The psychologist finds other weaknesses which the boy would not be able to define. He finds fault because the leader is not only generally a woman, but a young, inexperienced and untrained woman. The effort is made to get the best leaders, but the United Society officers have repeatedly said, that if a trained leader cannot be secured, a zealous young person or a committee of young people should go ahead with the society. The soul of an adolescent child is too fair and fine a thing to be handled by a willing but ignorant girl or bandied about by a committee. If the pastor, if the deacons or deaconesses, if the wise fathers and mothers do not see here the most important work of the church, then let the spiritual nurture of the children come in some other way.

The psychologist finds fault with the plan because it is not adapted to boys. It often meets Sundays and so reaches only the boy that wears the Sunday suit. It is an altogether different boy who goes out into life Monday. It ignores almost entirely the instincts for physical activity, out-of-doors, natural science, constructiveness, play. It calls for a self-expression which is premature and unnatural in those days of crisis when it is more important to brood than to utter. It offers a pledge which an honest boy hesitates to sign because of its breadth and life-long implication, the infraction of part of which is treated as a matter of course in the society. "Nothing tends more to give to children a sense of unreality," says Sir Joshua Fitch, "than the habit of exacting from them professions of faith, which do not honestly correspond to their present stage of religious experience." The organization is smitten with the plague of uniformity, which possesses the Sunday School. No matter what the local membership or circumstances, every band is urged to take the uniform topics and to adopt the same affiliated ideas. These topics deal much with rest, peace, resignation and introspection, essentially feminine themes, when, as Gulick has pointed out, the whole trend of a boy's nature is heroic, objective, katabolic. The idea of the movement is the congregation-idea : the crowded convention and excursion, international topics and methods, and in the local society, children gathered, exhorted, prayed with, dealt with—wholesale. There is no indication that the wealth of recent child-study literature which is transforming education and home life has yet gotten inside the door of the Junior Endeavor movement.

On the other hand such religious bands as these are splendid untrammelled opportunities for children to serve God and perform religious duty. They give instant definiteness to consecration. The word "Endeavor" was an inspiration. It expresses the ideals of youth. To try, to persist, to attain, these are the things a boy wants to do. The junior idea has in it the three things which I shall say later are fundamental to work that shall help boys: something to love, something to know, and something to do. The Endeavor hosts, "the army of the daybreak," have the enthusiasm, the confidence, the consecration and the opportunity to take hold of the boys, and do for them what no one else can do. Let the directors of the movement gradually retire methods that are merely imitative of adults and that insist on iron conformities and affiliate with themselves some of the other forms of work named in this chapter, and then the movement will furnish the leadership and the goal to a multitude of boys who need only the right touch to ripen them into Christian manhood.

Now to the Brotherhoods of St. Andrew, and of Andrew and Philip. The strength of these brotherhoods is *loyalty*. This gregarious spirit of boys has in it a great capacity for affection, as is seen in the strength of college secret societies among youths not out of the adolescent period. That spirit is beautiful and ennobling. The church is an institution as worthy of passionate devotion and of "team-work" as the college. The Brotherhoods seize this romantic affection and fasten it. There is a disadvantage in that, in either case, the Boys' Brotherhood was an after thought, and too often the work is modelled after that for men, instead of appealing directly to boys. There is sometimes, too, but not always, the impression given that the play-element is for the sake of winning those who are not Christians, instead of being the legitimate employment of the Christian boys themselves. I value the Brotherhoods very highly as opportunities afforded boys to develop their early Christian characters in each other's fellowship under mature, manly leaders.

The Knights of King Arthur, devised by the author, is an order of Christian knighthood for boys, based on the study and emulation of heroes and standing for the manly virtues of courage, chivalry, loyalty and service. Its special attractions are ritual, initiations, "quests," rolls for heroic deeds and hero scrap-books, the fraternity spirit and a system of recognitions known as "the peerage." It appeals to the romantic, hero-loving and imaginative side of a boy's nature as no other plan does, and so fills its own place. It gives some room to the constructive instinct in the making of the regalia by the boys, and to the play instinct in the exercises themselves. It is not secret. Its success depends almost entirely upon the leader. A man of imaginative, pains-taking spirit can make this plan a means of character building and religious nurture of singular power among boys. Those who use nothing but the material furnished by the originator or who do not push the special features of the plan patiently will not make much of it. The disadvantages of the plan in actual practice seem to be that it requires considerable work on the part of the leader, and that when the novelty of the idea wears off few leaders know how to turn to something new. Loyalty to a society or a plan should never outweigh loyalty to the boy.

The most interesting church work that I know of anywhere among boys is that exhibited in an organization known as the Captains of Ten, originated and conducted by Miss A. B. Mackintire of Dr. Alex. McKenzie's church in Cambridge. We have here a successful boys' club conducted by a woman. We have here a woman who, without fad or theory, has worked out for eleven years a plan which unconsciously fits the best theories. The basis is hand-work. The Captains of Ten are boys from 8 to 14, who are captains of their ten fingers. Sloyd, weaving, whittling, cardboard work and other activities are tried. The interest is missions which are taught graphically. The dramatic instinct is fully recognized in this and in the entertainments by the boys. Here we have loyalty, will-training, altruism, hero-worship, the imaginative instincts, all cultivated in manifold ways. The boys are graduated into the Knights of King Arthur, under adult leadership and with such original special features added as seem necessary. A personality that has been devoted to boys with such patience and thoughtfulness becomes a masterful influence on character. These boys seem to ripen into Christian life naturally. There is no Junior Endeavor society in this church. This illustration suggests the power of broader methods wielded by sense and consecration to assist in the actual religious decisions of boyhood.

We come now to the greatest educational institute in the church—the Sunday School. The Sunday School is the target of much wise and unwise criticism, but it presents the greatest hope and the largest opportunity of any institute of social pedagogy in the world. Its teachers are criticised for their lack of pedagogical training, but they are the noble and willing souls in the church, and they are trying everywhere to learn all that the pedagogists have to teach. The system of instruction is declared to be totally at fault, and it is rather appalling to think that a course of lessons which is being studied by 12,000,000 people is prepared by a committee, not one of whom is a specialist in the knowledge of child study. This is going to be changed. The better system is coming, but it has not arrived. A tentative outline of it is here offered. As applied to boys we may state it as follows: Its basal principle is that "interest is the only criterion of success and the only soil in which teaching takes root." "The child must rise through," says Ellis, "not fly over and above the race's religious growth." The interests of boys under nine are simple, near, concrete. Their religious conceptions are anthropomorphic, animistic, even fetishistic. Teaching should be topical: very simple and definite subjects being chosen. The childhood of Jesus and of other Bible characters, and the care of God as illustrated in nature and the animal world will be indicated as the subjects of teaching. The object of teaching is to lead to childlike trust in the Heavenly Father. In the stage of boyhood the mythologic, the heroic, the sensuous or dramatic, and the egoistic instincts appear. It is the age of law. The Old Testament is the textbook, with sidelights from legend, mythology, fiction and heroic and missionary biography. Teaching should be biographical. The method, as in the previous age, should be that of the storyteller. The object of teaching is to inculcate right principles and build up right habits. As the age of ferment approaches confidence changes to doubt, egoism broadens to altruism, and the time for a definite religious as well as physical regeneration comes on. Teaching should be inspirational. We are surprised to learn that the story of Jesus is an adolescent interest. Dr. Hall suggests that as he became a man so as to be a ladder to teach us to know him as God, so the teaching about him should be first of the human and then of the divine element. In adolescence teach the altruism of Christ. It is the age of love. The personal Christ must be held up as the object of passionate devotion and heroic service worthy of the yielding and consecration of the will and the entire moral nature. The storytelling method now yields to that of free, frank conversation.

The course of lessons in the Sunday School of the future will (1) recognize the mental and moral development of the child, by what the Rev. Chas. E. McKinley well calls "a graded gospel." "Grade the gospel, not the child." (2) In the use of the Bible with children it will magnify the personal element, will teach the Old Testament first, and will teach the humanity of Christ before his divinity. The purpose to inform the child will yield, as Dr. Street urges, to an effort "to aid it to pass from stage to stage without atrophying in any one. Growth, and not learning, is what is desired." "What a child has felt he never forgets," said Alice Wellington Rollins. "What he has merely been told he may forget in five minutes." (3) "Love is the keynote of all our work." "The heart is the universal faculty. We live in the heart." The adolescent period must be focussed upon nothing less worthy than the endeavor to center the love of the child on Christ as Hero, Saviour and King.

The Sunday School should itself undertake the church's boys' club work. I plead for this broadening of its function. It has the best opportunity to do this. Here is a school with 200 boys. Organize a separate boys' club and you may get 30. Ask the boys of the school to hold a weekday session and you can get nearly all. It has the leaders. The mature people who teach classes are the ones to do this work. If, instead of having one earnest individual it were understood that the Saturday session is as much the teacher's work as that of Sunday, the task would not be hard for any one. The school needs the work. Its only weakness is that it is isolated from life. The school has the confidence of the church. An authorized weekday institute for boys and for girls would have prestige and influence. If it would hold such a weekday session it would make the turbulent Junior Society and the struggling boys' clubs unnecessary. The school has the equipment of place, heat, lights, money and apparatus. By thus co-ordinating all the educational work we would be free from this curse of over-organization of which we complain.

A new fad for supplying the deficiencies of the Sunday School is the revival of Catechism Classes. They are supposed to furnish candles of truth ready moulded for future burning. Sir Joshua Fitch says of them: "I attach small value to catechisms. We never employ them in teaching any other subject than religion. And the reasons are obvious. They are stereotyped questions and stereotyped answers. They leave no room for the play of intelligence upon and around the subject. They stand between the giver and receiver of knowledge, and do not help either of them much. . . I appeal to your own experience. Do you find that the fragmentary answers which you learned in the catechism help you much in your religious life? When I look back on the work of my religious instructors, do I find that I learned most from their formal lessons, or from the influence of their character and sympathy?" Dr. Hall found that only one child out of

12,000 and that the precocious son of a minister, cared much for doctrine. He gives no room whatever to the method, which "has been obsolete in education for four centuries." A recent conference of ministers on catechetical instruction seemed to draw toward the conclusion that it is the *class* rather than the catechism that is important. The catechism is a barrier to personal intercourse and to intellectual growth. But the intimate fellowship of the wise pastor with adolescents, for the purpose of what Mr. C. E. McKinley calls "educational evangelism," is most excellent. The Rev. Thos. Chalmers, of Manchester, N. H., has exemplified the co-ordinating method which I have recommended by reviving the old Scotch church idea that the pastor *expects* to have the attendance of the children of his people at a certain age for instruction just as much as the secular school teacher does.

The church has other means of helping boys which are not everywhere recognized. The church service itself, the boy chior, the liturgy where it is used, the sacraments, are used in the Roman and Episcopal churches as an appeal to the imaginative and dramatic instincts with wonderful power. They may rightly be so used in other communions. Preaching to children, especially to adolescents, is the most beautiful art and the most rewarding task of the Christian minister. The spectacle of a church full of adults, who have passed the era of crisis and most of whom have been converted, engaging the efforts of a preacher is one of the most unsatisfying sights on earth. It is a mistake to think one has to "preach down to" adolescents. The most virile, noble and splendid truth is the best food for them. The emphasis upon Sunday School attendance as a substitute for children is most unfortunate, since so many children leave the Sunday School at the age of greatest danger, and, having never learned the habit of church attendance, pass from all church influence. The Bible Normal College of Springfield, in its interesting experiment of the care of a mission church in that city, has literally put "the child in the midst" by making the Sunday morning service one for children. My own experience is that if we give the children something to come for, and encourage their presence by simple rewards and attentions, we can secure and sustain the habit. In my own church, last year, 49 received such rewards, of whom 22 were boys.

The revival appeals especially to adolescence. It satisfies the emotional nature. It is a simple appeal to the heart. Take away the late hours, the long services, the untrained and fanatic exhorters—features which are incidental—and reduce it to a "children's crusade," in which the social and emotional element is retained, where the ideal of the heroic and loving

Christ and his grand and strenuous service are held up by the pastor or a wise specialist with children, and we have an instrument of historic dignity and perpetual value. The danger is the forcing of the nature before it has come to its day of choice and the neglect to follow up the decision by the careful training of the pastor's class. A plan working in this direction which has found favor in the Sunday School is that of a Decision Day; to which, from my own experience, I can give a guarded approval. The decision asked for should always be simple, definite, and never with the clause "for my whole life long." When made it must not be thought to mean too much and a premature expression urged. Never count or announce the number of decisions. Neither must it be allowed to mean too little and be altogether neglected. It should not only be asked but reiterated annually and the results from year to year tabulated, studied and followed up individually.

I will put my idea of the church's educational scheme into form in the next chapter, which is a summary of conclusions drawn from what has preceded.

IV.

SUGGESTIONS AS TO HOW TO HELP BOYS.

Learning that there is a period when the boy seeks and needs a larger and a better social fellowship, we have discussed the ways in which boys have sought this and the ways by which adults have sought to furnish it. We may now in a sort of summary endeavor to answer this general question, "How shall we best help our boys through the period between ten and eighteen years of age?"

First, what means have we?

The greatest means of helping the boy is the Home. I have not emphasized this, because we have been talking of other things. But the one thing that discourages the social worker for boys is the recognition that the divinely appointed institution, which has the most of the boy's time, interest and loyalty and every needed inspiration and appliance for his nurture, is untrue to its duty, and that nothing else can possibly take its place. Not only are children God's ambassadors to earth's homes, but it is the personality of the mother that originates in the child the earliest and the most permanent ideas of God. When a boy arrives at adolescence he turns from his mother to his father. The boyhood of the father is the hero of the son, and it is almost impossible, as it seems ungracious, to provide substitutes for the ethical teaching and practice of the home. The influences that disrupt the home and prevent its members from ever being together are most dangerous, not in their influence upon the parents, but upon the child. It is the evening lamp that is home's lighthouse. A home without a good eventime is a home without hope, and the way a boy's day ends at home is a prophecy of the way his life will end. The hour after sunset is the Sabbath of the day. It seems, too, as if the very years of crisis were those most neglected. A creeping baby is submerged in toys, but a growing boy of ten has nothing at home to play with. A child needs caressing much more at twelve years than at twelve months. Many parents to-day are like cuckoos, willing to leave their young in anybody's else nest, and trusting their religious nurture to those who may be willing to take up the task of saving other people's children.

Many boys could be carried through the age of unrest without resort to outside agencies. When the "gang" spirit appears the parent can co-operate with it, rather than obstruct it. Jacob Riis tells how his wife met such a case of apparently dangerous conniving:

"My wife discovered the conspiracy, and, with woman's wit, defeated it by joining the gang. She "gave in wood" to the election bonfires, and pulled the safety valve upon all the other plots by entering into the true spirit of them,—which was adventure rather than mischief,—and so keeping them within safe lines. She was elected an honorary member, and became the counsellor of the gang in all their little scrapes. I can yet see her dear brow wrinkled in the study of some knotty gang problem, which we discussed when the boys had been long asleep. They did not dream of it, and the village never knew what small tragedies it escaped, nor who it was that so skillfully averted them."

The happiest memory of my own boyhood was—in a place where the neighborhood spirit was yet warm—of the weekly evening gatherings in the various homes in turn, with the elders conversing at one end of the room and we youngsters playing games and acting plays and charades at the other. I do not remember that any of us ever cared to be anywhere else at night. The story of the Alcott family is another entrancing illustration of what I mean. The curfew ordinance has at least the advantage of making it necessary for the parent to keep the child in the home evenings.

Next to the evenings, Sundays are the times of the greatest opportunity in the home. I know how hard it is to abbreviate the afternoon nap for the sake of the boy, but it will be better to do so now than to be awake with anxiety later. The Junior Endeavor movement has kindly taken the burden of Sunday afternoon from many a parent, and has thereby done a wrong to nature, to the home, to the Sabbath and to both parent and child. The dumping of children into Sunday Schools that their parents may go off Sundays is heathenish and abominable. It is also a question how far any outsider has the right to encourage religious feeling in a child without the knowledge of its parents.

If the period of habit-making has been passed wisely in the home the period of will-training will present fewer difficulties. City households that are able to emigrate bodily to the country solve half the difficulties of restless childhood and store up material for winter nourishment and exercise. The country week and the vacation school and the summer camp do the same thing in a lesser degree.

Next to the home we must place instrumentalities that are home-like. Celia Thaxter told of

> "The gracious hollow that God made
> In every human shoulder, where he meant
> Some tired heart for comfort should be laid."

God destined some people to be parents. Others he left for god-parents. That old chrismal idea needs to be revived. Many an empty heart could be filled with lad's-love. There are great houses which are silent that could be filled with wondering children ; and unsatisfied, cultured lives that could be poured out in no finer crusade than to give a few boys a place once or twice a week that has the home-touch. Some Sunday School teachers have thus brought the school into that contact with life whose lack we mourned in our last chapter. Many a college graduate—like the boys' athletic hero, Evert Jansen Wendell, or some girl from Smith or Vassar—has done the same. Among the well planned ways of helping children and helping their homes at the same time I think the best is the Home Library System originated by Chas. W. Birtwell. It has no big convention or newspaper organ to commend its workers and no fashionable or ingenious features to make it a fad, but it is the most splendidly sensible thing of which I know. A bookshelf of books is loaned in a poor home and a volunteer visitor comes in and gathers a group of eight or ten children to read and talk them over together. Games and pictures are circulated in the same way and the pass-books of the Stamp Savings Society are distributed and collected. Anybody could do this, even where such a work is not organized as it is in Boston.

Next we come to the Public School. I cannot discuss this. The most enthusiastic profession on earth is that of the teacher. The greatest advances in scientific application of knowledge are being constantly and willingly made in the school curriculum and methods. Two recent changes in the school only can I mention. First, the instruction in manual training and artisanship which was once given in every New England home to both boys and girls has now devolved upon the school. The idea of work individually planned and spontaneously carried to completion, which I have defined as the method by which the will is trained, has not yet come in with this change. Instead, the immense amount of seat-work and home-work tends in exactly the opposite direction. Second, with the passing of the reading of the Bible from the schools, moral education, with the exception of instruction in temperance, has almost ceased to exist. Some startling statements have been made by Miss Margaret Evans and others as to the total lack of ethical knowledge and discrimination manifested in groups of children going out into life from the public school. Social pedagogy must supply this need of will-training and ethical training, until the schools are forced to take it up.

The last means of helping boys through adolescence is that which we have discussed in previous chapters; organization in social and religious institutions; in short, boys' clubs.

By what methods has our study pursuaded us that we may best use these societies for the making of manhood?

I have spoken of the value of Mr. George E. Johnson's studies and experiments with play and games. You will be interested in the outline of his Play-School curriculum which he has furnished me.

"*General Outline of Work. Andover Play-School and Boys' Club.*

"Group I. Boys ten to fourteen years old.

"Play-School, winter session: Wood-work, gymnasium, games, collections, music, printing, library, savings bank.

"Spring: Garden class started, nature work incidentally. Outdoor games 'patroned' Saturdays.

"Summer: Vacation Play-School.

"Group II. Boys fourteen to eighteen years old.

"Winter: Sloyd, mechanical drawing, gymnasium, athletic club, games with coaching, checkers, chess, whist, billiards, music, banjo club, collections, printing, paper issued, savings bank, instruction in various branches, library (reading watched, hints given, use of library).

"Spring, summer, and fall: Outdoor gymnasium, patronage of athletic teams, game-master for the Richards Field.

"Group III. Age eighteen to twenty-two.

"Winter: School of politics, gymnasium, athletic club, games with tournament and coaching, music, dramatics, printing, etc., continued, instructions in various branches, library continued, savings bank (Andover Bank).

"Spring, summer and fall: Outdoor gymnasium, patronage of athletic teams, game-master, etc.

"Miscellaneous: Church committees to keep track of various ages. Lectures for information, morals, citizenship, health, purity. Socials."

In the Lincoln House Play Work Guild the course in creative work in arts and crafts after leaving the kindergarten age is as follows:

"Age 6 to 8: Advanced kindergarten course (Course II) in clay.

"Age 8 to 10: Course III clay, perhaps varied with paper sloyd.

"Age 10 to 11: Simple fret work, varied with Course II in paper sloyd, or Course IV in clay.

"Age 11 to 12: Fret work, Course II, varied with Course I in cardboard sloyd.

"Age 12 to 13: Wood sloyd, Course II in cardboard, free-hand drawing, advanced course in clay.

"Age 13 to 14: Simple cabinet making, wood carving, Venetian iron work, basket making, printing, lettering, drawing, water color work.

"Age 14 to 17: Cabinet making, leather work, lettering, printing, weaving, metal work, water color work, drawing."

These boys have also the gymnasium and the small group boys' clubs (8 or 10 boys) in which, as they may choose, they take up collections, scrap-book making, travel, study, simple fancy work, animal study, and an endless variety of things which teacher and boys can pursue together.

Of the methods which may be used we may speak of a few more definitely.

Games and Play. Mr. Johnson urges that "for school children should be chosen, as far as possible, the games which are based on instinctive tendencies. On the hunting instinct may be based games of chase, games of searching or hunting, games of hurling or throwing; on the fighting instinct, games of contest, as wrestling, boxing, trials of strength; on emulation, as jumping, racing, trials of skill; on curiosity, parlor magic, riddles; on sociability, the social games; on acquisitiveness, collections; on constructiveness, wood-work, sewing, making toys, doll-dresses; on the caring instinct, dolls, pets."

The purpose of choosing games should be, he says:

"1. To stimulate a healthy play interest and educate it.

"2. To play games adapted to exercise certain faculties of the mind and body.

"3. To teach games which may be played at home."

I will only remark further that while it is a matter of experience that games teaching observation, memory, attention, and furnishing physical activity are quite numerous, indoor social games which can engage a large social group are very few. He would be a benefactor to childhood who would present even one good one. This is especially true of games enjoyable by older boys and girls.

Gymnasiums. The gymnasium is instantly attractive to a boy. He sees in the ropes and bars and chest weights the vision of himself as an athlete and a victor. I do not think the gymnasium as mere physical exercise appeals to a boy. It gives him nothing to anticipate or to remember. I think it is to the combative and emulative nature that it appeals. For these reasons the gymnasium should be controlled by the play interest. And as it is this interest that dominates, those boy-leaders who have no gymnasium can get along without it if the play-interest in physical activity can find some other room for exercise.

Handiwork. This is the reason why hand-training is commended. It gives the boy more than the gymnasium and it appeals to more instincts. The trained hand opens the door of shop and laboratory. It not only is the chief means of will-training but it leads to the discovery of adaptabilities of life, it opens the way to specific usefulness, it solves the question of the life tendencies, it develops the expressing man, and the interest it excites leaves no room for crime, self indulgence or mischief.

Wood-work would naturally suggest itself as the easiest and least expensive form of handiwork, as well as the most varied in result. Elaborate equipment of salaried teachers are not indispensable. With a good old carpenter and the boys' own jack knives I kept thirty of them happy last winter. It is very easy to let the hobby of utilitarianism and the desire to make pretty things to photograph for the annual report run away with the handiwork method. The purpose should be, I take it, not to make artisans but manhood, not hand-agility but will-power. For this purpose I know nothing better than to give a boy an old shoe case and tell him to make a toy house out of it for a treasure chest. Here he has opportunity for invention and patience and result enough for the thing you are trying to do. Of course what is done should be worth doing and be well done. This faculty for mechanical and individual activity has been almost lost to-day in the differentiation of labor.

Collections. Dr. G. Stanley Hall found some years ago that of 229 Boston school boys only 19 had no collections. A recent study of children's collecting shows that the fever begins at about 6, rages from 8 to 11, is at its height at 10, and, among boys, lessens after 14. Of things collected the following general classes exist :

cigar pictures, and stamps, 34%
objects from nature, 32%
playthings, 11%
miscellaneous, mostly trivial, 8%
pictures, 6%
historical, 3%
literary, 2%

The rage for stamps is from 9 to 11 and for cigar and cigarette pictures from 11 to 12. Among the prominent single objects gathered, beside those already mentioned, are : marbles, advertising cards, books, rocks, shells, war relics, buttons, badges.

While local opportunities vary, these facts would furnish suggestion as to the directions of probable interest. It will add much to the value of the process if the apparatus used, such as aquaria, cages, flower-presses, scrap-books, be made by the boys themselves.

Saving. In this connection it seems necessary only to commend highly the plan of the Stamp Savings Society and the pass-book system of the boys' clubs.

Music. Believing in the power of music to soothe the savage breast, several clubs have organized choruses. Churches organize boy-choirs as much to help the boys as to help the church music. Some clubs print the better popular ballads of the day, mingled with patriotic songs, on sheets for singing in unison. Contrast the sunset hour in a college town with hundreds of boys singing on the campus with the same unmusical or uproarious hour in a large village or small city, and you see something of what music will do.

Nature Study. I have already spoken sufficiently of collections of gardens, of vacation schools, of summer camps and of winter groups for nature study. I commend the Agassiz Association.

Drama. This instinct is much neglected. It is as legitimate as any, and craves expression. Mr. William A. Clark speaks of "the boys' mind, cursed with melodrama." He is referring to the street boy and his interest in sensational news, prize fights and the plays of the South End play-house. Some substitute for these evils must exist. The charade, the dialogue, the missionary and Sunday School concert, and the desire of boys and girls to "get up an entertainment," are manifestations of the same instinct in our church life. I am watching for light on this matter with much interest. In this age, when open church opposition to the theater is becoming silent, our children will be kept from the real temptations of the modern theater by giving them their own opportunities for expressing this instinct for personifying character and action. The novel-reading craze is a kindred one, and may be similarly met. A sedate Congregational women's home missionary paper contained recently a most stirring little play of western missionary adventure to be performed by boys, which was called "a missionary concert exercise." I don't care what you call it. It was a good thing.

The Knights of King Arthur helps the dramatic instinct without including the theatrical element.

Socials. I have advocated the organizing of boys and girls separately. In organizations for sitting still and talking in meeting I insist on this, for those two things are specialties of little girls. But in societies of the more active sort it does not make so much difference, for the boys and girls before they are thirteen will not pay any attention to each other. It is desirable, when children are maturing, that they should be brought together under adult auspices for mutual acquaintance and development. The things that do take place at church socials and unchaperoned children's parties, if written out would make a chapter of horrors. Is there such a thing as a sensible church social for boys and girls? It is an actual fact that some parents think a dancing school is a better place for their children than the church vestry. No doubt it does pay some attention to manners. In the age of physical exuberance these socials need special attention. They should be small. The children should come in sections, if there are too many to come at once. There should be one head, who should have a definite plan for the entertainment to be provided, and a sufficient body of adult assistants. The pleasure should be spontaneous and much of it provided by the children themselves, but it should be refining, of continuous interest, inclusive of all, and governed in its length by the bed times of the children. It should also be remembered that when well meaning people ask children to come from their homes in the evening, whether to play or to pray, they are responsible that those children shall arrive home early and in good company. Personally, I am through with affairs that send young girls forth on city streets at nine o'clock with accidental or self-chosen chaperonage.

Stories. Not only is the story the chief way of teaching in both the secular and the Sunday School until the child is well along in adolescence, but it is a method of universal interest. It was the primitive form of history and the first means of perpetuating crude scientific discovery and religious tradition. It is the material of the Old Testament and the charm of the New. It is a perpetual interpretation of life. Fairy stories not only appeal to but are the actual translation of child-life, which is fairy-life, in its wonder, credulity, and ignorance of boundaries and limitations. Clara Vostrovsky gives a chart of the elements of boys' interest in stories, which I reduce to per cents., as follows: action, 36; name, 24; appearance, 10; possession, 7; speech, 5; place, 5; time, 3; feeling, 2; dress, 2; esthetic details. 1½; sentiment, 1; moral qualities, 1; miscellaneous, 2½.

The girls' interests were quite different, being especially strong by comparison in speech, appearance, dress and moral qualities. I have found the story excellent for the children's sermon. It is soothing in any discord that may arise in the children's society. It comes in well during the social. Nothing is better on Christmas Eve or Watchnight or in the solemn days of Holy Week for moral impression. The moral, by the way, is better not at the end of the story, but in sly touches in the middle and as produced by the narrative itself. He who can look into a circle of shining children's eyes and tell a good tale knows one of earth's finest luxuries. Oh, for more shamans, minnesingers, troubadours, bards, jongleurs or Pied Pipers!

Pictures. I need not speak of the many uses of the Perry Pictures, The Elson Prints, etc., in creating an interest in art, history, collecting, etc. I have found these pictures of Holman Hunt's especially helpful in the religious instruction of adolescents. There is something in their opulence of detail and mystic beauty which makes them singularly effective. They may be used for impressing the solemn lesson of the importance of adolescence as the time of choice and opportunity. First, I use "The Child in the Temple." I point out the many details: the inscription on the door, the doves, the rejected stone in the court, the blind beggar, the lamp lighter, the babe brought to circumcision. Then the characters appear: the doctors with their scrolls and phylacteries—one is blind—Mary with her look of amazement and love, Joseph with his protecting hand, and the boys in the picture—the musicians, the slave and the Boy Jesus. It is his hour of awakening to life's meaning, God's will and his hour of choice. I use the "Light of the World" to lead to the thought of the life-door at which the Christ knocks, *which can be opened only from within.* And "The Shadow of the Cross" suggests the manliness of the young Christ and his choice of the cross rather than the jewels over which his mother lingers.

Questions. The true leader will be often Socratic. He will not furnish categorical, catechetical answers, but, finding that the *one thing* humanity and especially child-humanity is unwilling to do is *to think*, he will constantly in private and in public suggest haunting and leading questions of ideal, casuistry, and practical ethics which must and will be answered.

There are many other methods which I could mention. Some of them were suggested in the analyses in Chapter III. The seeking and training of good taste will not be forgotten, the illustrating and emphasizing of cleanliness, chastity, temperance and reverence by personal conversation rather than morbid "purity talks" or class exercises will have its place, talks by men whom the boys admire, and the introduction of rewards and special privileges will have a stimulating effect, if they are made accessible to a fair grade of effort rather than exclusive to a first and second. The last method which I name is the most important.

Personality. The three curses of humanitarian work are utilitarianism, uniformity, and numbers. And the greatest of these is numbers. It takes perpetual vigilance to do church or social work without becoming a slave to the addition table. All work for men that amounts to anything is in the end the influence of personality on personality. So in boys' work we have two things of importance to consider: The personality of the leader and that of the boy. Mr. Mason suggests as the easier qualifications for such a leader that "he must necessarily have the magnetism of Moses, the patience of Job and the wisdom of Solomon." It would be unfortunate to place the standard so high that everybody would shrink from the work. The boy is influenced by his leader in two ways: through his imitativeness and through his affections. He idealizes his leader and tries to become like him. "Teaching is really a matter of contagion rather than of instruction." His leader must therefore be a person of character and self control. He loves his leader and wants to do for him. His leader must be a person of ideals who can offer him good and true things to do.

The personality of the boy must never be forgotton. We must forget our addition table and stop seeing our boys as flocks. The most important thing any one can do for a boy is to love him. We must know each one in his school, his home, his playing and gathering places, as well as at the club or our own home. There are so many different kinds of boy under one hat and boys differ so much in their individual interests and the interests of one boy changes so fast that it takes a watchful and encyclopedic mind to catalogue them.

The way to help boys by the methods we have mentioned, as Lancaster said, is to "inspire enthusiastic activity." "Oh!" says one, "you give the boys something easy all the time." The things that inspire enthusiastic activity in a boy are not easy things. Is baseball easy? Is football easy? Is swimming a mile easy? Are wood-work or parallel bars or punching bags easy? Interest is not ease but it makes things easy. In that marvellous study in the New Testament of Jesus and the Rich Young Man, we have a study of Jesus and adolescence, and the appeal that the Master made which aroused that slothful idler almost out of a lifetime of languor, was an appeal to the difficult, with this inspiration, his own passionately declared love for him.

We should use as many methods as we can thoroughly, letting each get its effect, and co-ordinating also, so as to feed the boy with as many interests as possible. We cannot tell which one may determine his life-work or mould his character. It is inspiring to know that in the self-originating exercises of the boys' club one may do what the school does not accomplish—help the boy to decide what he shall be.

We should give each boy something to know, something to love and something to do. That is, we must train his mind, his heart and his hand, and while doing these three we train his will.

The problem of the church and boys is not different but is larger than that of the boys' club. The boys' club seeks character. The church seeks Christian character. The methods of the church should be those which I have already named with those additional ones which shall encourage a definite decision for Christ during the period of choice and which shall establish and exercise that decision. Religion in a child is like measles—it breaks out in the face before it does in the hands. It is as necessary to secure Christian activity as it is Christian allegiance.

Not only does each boy have his own time and form of crisis but he has his own way of beginning the religious life. In the Episcopal church the boy is trained to believe that he is a child of God. At adolescence the confirmation class awaits him to seal his relationship and his crisis is likely to be one of forming fresh ideals only. In some churches boys are told that they are the children of the world, if not of the flesh and the devil. They expect and usually reach a very sharp crisis of definite Christian purpose.

Mr. E. M. Robinson, International Boys' Secretary of the Y. M. C. A., has put these differences of experience in a vivid and homely way.

"Boys enter the religious life in at least as many ways as they enter the water for swimming: (*a*) Some plunge in—a definite decision which settles once for all what their attitude toward right and wrong shall be, what their relation to their God shall be. (*b*) Some wade in—deliberately, cautiously, step by step, each step revealing that another step is desirable.

(*c*) Some run in a little way and then come out again, but continue to run in a little farther each time, till at last they swim off—a number of changes of mind. (*d*) Some are forced in—they may, finding themselves in, decide to remain, or they may make frantic struggles to get out. (*e*) Some sit down on the beach and simply let the tide come up about them, till it floats them off—by not resisting the tide about them, they practically accept the situation. A boy enters the religious life by deliberate, comprehensive decision, by an accumulation of little decisions, by non-resistance to influence about him, which is a decision. In all cases, by his own choice accepting, or decision.''

My own ideal scheme for a system of church education for boys is as follows. Although the list may seem formidable, it requires only the instrumentalities and workers possessed by the average church.

I. Co-ordination with all other means of education—home, school, play-ground, vacation, library, museum, local historical sites, etc.

II. The following church instrumentalities:

The Sunday morning service,

The Sunday School,

A boys' club affiliated closely with Sunday School, with no clan or cast of religious profession attached.

Home visitation and consultation (with an enrollment by personal inquiry of the boys' separate interests and experiences).

III. Scheme for church education of boys:

1. Religious training:

Weekly children's sermon.

Sunday School instruction: Old Testament first, then life of Christ, then Christian ethics.

Decision Day, preceded by a few special children's meetings, explanatory of the Christian life.

Special training in
  how to use the Bible
  how to pray
  how to serve Christ, following Decision Day.

Seeking opportunities for service for children: choir, ushers, entertainments; individual activity.

2. Will-training:

Wood-work
Games, puzzles, conundrums
Rewards for church and Sunday School attendance.

3. Heart-training:

Liturgy
Bible and hymn-learning

Music
Drama
Stories and pictures
Knights of King Arthur (at the boys' club meeting)
Pets
Personality of leaders.
4. Mind-training:
Collections
Printing
Saving
Missionary and general information.
5. Physical Training:
Marches and Drills
Wood-work
Tramps, Tours.
6. Social Training:
Socials
Entertaining others
Missionary giving.

The needs and possibilities of work for boys tempt the student into the fields of enthusiastic rhetoric. One third of the people in America are adolescents. Three million of the human beings in America are boys between twelve and sixteen years of age. The so-called heathen peoples are, whatever their age, all in the adolescent period of life. What a field! How suggestive to philanthropy and to missions!

The attention of the church during the last twenty years has so swung toward the young that it takes no prophet to foretell that this is to be the central work of the church in the new century. Jesus, who appeared before the world at the beginning of his adolescence and left it at its close, set the Child in the midst and said, "Of such is the kingdom of heaven." The psychologist and the Christian are both listening to this word of the Master.

In the development of the boys' department of the Y. M. C. A., and in the growth of the big city boys' clubs, in the founding of such institutions as the Bible Normal College, whose motto is Horace Mann's "Wherever anything is growing one former is worth a thousand reformers," in the opening of a new profession, that of the teaching ministry, in lay work in the church, we have abundant intimations that the field of work for boys is soon to offer many opportunities for many men's life-work. In the smaller groups of those engaged in social service, in the Sunday School and the other forms of church nurture, the harvest is already white for splendid consecrations of volunteer helpers.

This is the New Crusade. This is the "Student Volunteer Movement" that has an appeal at home as well as abroad.

Let us help make the men of to-morrow!

BIBLIOGRAPHY OF WORKS REFERRED TO.

This is not a bibliography of the subject, but of certain suggestive books. Behind this topic lies the whole literature of anthropology, sociology and pedagogy. The standard bibliography of Child Study is that by Louis N. Wilson, of Clark University. There is an excellent list of books on Religious Pedagogy in the article on "Sunday School Work and Bible Study in the Light of Modern Pedagogy" in the *Pedagogical Seminary*, Vol. III, No. 3, 1896.

On Child-Study of Adolescence.

BALDWIN, J. M. Mental Development in the Child and the Race. New York, 1895.

BURNHAM, W. H. The Study of Adolescence, *Pedagogical Seminary*, Vol. I, pp. 174-198. Worcester, 1891.

CHAMBERLAIN, A. R. The Child and Childhood in Folk-Thought. New York, 1896.

DANIELS, A. H. The New Life: A Study of Regeneration, *American Journal of Psychology*, Vol. VI, 61-106. Worcester, 1893.

DAWSON, GEORGE E. Children's Interest in the Bible, *Pedagogical Seminary*, Vol. VII, No. 2, July, 1900.

JAMES, WILLIAM. The Principles of Psychology. New York, 1899.

STARBUCK, E. D. The Psychology of Religion. New York, 1899.

STREET, J. R. The Religion of Childhood. A Paper before the Methodist Congress. Reprinted in Zion's Herald, 1899.

VOSTROVSKY, CLARA. A Study of the Story. In Studies in Education, 1899.

YODER, A. H. A Study of the Boyhood of Great Men, *Pedagogical Seminary*, Vol. III, No. 1, 1896.

The Association Outlook (files), edited by Luther Gulick. Springfield, 1895-1900.

On Boys' Organizations Originated by Boys.

CULIN, S. Street Games of Brooklyn, Journal of American Folk-Lore, Vol. IV, pp. 221-236, 1891.

HALL, G. STANLEY. The Story of a Sand Pile, Scribner's Magazine, Vol. III, pp. 690-695, 1888.

JOHNSON, J. H. Rudimentary Society among Boys, Johns Hopkins University Studies, No. 11, 2d Ser., 1884.

RIIS, JACOB A. How the Other Half Lives, and A Ten Year's War. New York, 1892 and 1900.

SHELDON, HENRY D. The Institutional Activities of American Children. Reprint from *American Journal of Psychology*, Vol. IX, No. 4. Worcester, 1899.

On Boys' Organizations Originated by Adults.

BIRTWELL, CHARLES W. Home Libraries. Boston, 1899.

CHALMERS, THOMAS. A Revival of the Catechumenate, Bibliotheca Sacra, 1899.

CLARK, WILLIAM A. Lincoln House Bulletin. Boston, 1900.

JOHNSON, GEORGE E. An Educational Experiment. Reprint from the *Pedagogical Seminary*, Vol. VI, No. 4. Worcester, 1899.

MEAD, GEORGE WHITEFIELD. Modern Methods of Church Work. New York, 1897.

Manuals of these societies (list of these in my Manual of Boys' Clubs, 1898).

On Games and Play.

BURK, CAROLINE F. The Collecting Instinct, *Pedagogical Seminary*, Vol. VII, No. 2, July, 1900.

HUGHES, J. L. The Educational Value of Play, and the Recent Play-movement in Germany. Educational Review, Vol. VIII, pp. 327-336.

JOHNSON, GEORGE E. Education by Plays and Games. Reprint from the *Pedagogical Seminary*, Vol. III, No. 1, 1896.

—— ——. Games and Play, Social Work Monographs. Boston, 1898.

—— ——. Play in Physical Training. Address before the National Education Association, 1898.

NEWELL, W. W. Games and Songs of American Children. New York, 1884.

PLUMMER EDWARD M. Athletics and Games of the Ancient Greeks. Reprint from the American Physical Education Review, 1898.

Various handbooks of games, mentioned in Mr. Johnson's works.

On Training the Will and the Religious Nature.

ADLER, FELIX. Moral Education. New York, 1896.

CRANE, WILLIAM I. A Plea for the Education of the Hand, The Philistine, Vol. X, March, 1900.

FITCH, SIR JOSHUA. Educational Aims and Methods. London, 1900.

HALL, G. STANLEY. The Moral and Religious Training of Children and Adolescents, *Pedagogical Seminary*, Vol. I, pp. 196-210, 1891.

LANCASTER, E. G. The Psychology and Pedagogy of Adolescence, *Pedagogical Seminary*, Vol. V, 1897.

PEASE, GEORGE W. A Suggestion toward a Rational Bible-School Curriculum, Biblical World, August, 1900.

SHELDON, WALTER L. An Ethical Sunday School. New York, 1900.

STREET, J. R. A Study in Moral Education, *Pedagogical Seminary*, Vol. V, 1897.

WALKER, FRANCIS A. Discussions in Education (articles on Industrial Training, pp. 123-206; written 1884-7). New York, 1899.

The Use of a Doctrinal Catechism. Symposium in the Biblical World, September, 1900.

NOTE. The quotations from William A. Clark, Frank S. Mason, Thomas Chew, E. M. Robinson, are from papers furnished by them for my How to Keep Boys. Boston, 1900.

RECENT GERMAN DISCUSSIONS ON FOLK-LORE IN THE SCHOOL.

By Alexander F. Chamberlain.

The delight of children in fairy tales and the common confession of genius that the blind harper, the gypsy story-teller, or the *ayah* of many tales, first created a real love for that larger song and story, of which all the great literature of the world consists, are proof enough that Folk-lore is a mighty force with the young. Among primitive peoples, it is often almost the sole means of literary culture, aside from that self-development, unchained to race or clime, or age, which creates the seer, the poet, and the sage. If, as many argue, and as science seems now to have largely demonstrated, the childhood of the race and the childhood of the individual are parallel in their development, there is good reason to seek out in the literature of the former the food for the nascent intelligence of the latter. An impetus in this direction has been given by the "Child Study" movement, which for ten years past, especially, has sought to furnish a natural basis for the education and instruction of children, by investigating the fundamental phenomena of childhood in their relation to the corresponding phenomena in the life and thought of primitive man.

The story, one of the prime elements in Folk-lore, has always had a place in education since the beginnings of human society. As Mr. E. S. Hartland well says (p. 2):

"The art of story-telling has been cultivated in all ages and among all nations of which we have any record; it is the outcome of an instinct implanted universally in the human mind. By means of a story, the savage philosopher accounts for his own existence and that of all the phenomena which surround him. With a story, the mothers of the wildest tribes awe their little ones into silence, or rouse them into delight. And the weary hunters beguile the long silence of a desert night with the mirth and wonders of a tale. The imagination is not less fruitful in the higher races; and, passing through forms sometimes more, sometimes less serious, the art of story-telling unites with the kindred arts of dance and song to form the epic or the drama, or develops under the complex influences of modern life into the prose romance and the novel. These in their various ways are its ultimate expression; and the loftiest genius has found no fitter vehicle to convey its lessons of truth and beauty.'' In his chapter on '' The Art of Story-Telling,'' Mr. Hartland shows how the unwritten word of the travelling tale-teller has often been more powerful than the printed page of the Scriptures; how much real basis, indeed, there is for the famous statement attributed to '' a very wise man'' by Andrew Fletcher, of Saltoun, that '' if a man were permitted to make all the ballads, he need not care who should make the laws of a nation.'' Concerning the educational employment of the story among certain American Indian peoples, Dr. F. C. Spencer observes (p. 80): ''The Pueblo child does not receive commands to do or refrain from doing without the reason for the command being given in the form of a story, in which the given action is portrayed with the good or evil resulting to the doer. These legends, or folk-tales, are very numerous, so that one may be found to illustrate almost any case that may arise.'' And what is thus written of the Pueblo Indians of Arizona and New Mexico will stand for many other peoples, barbarous and savage. Moreover, the difference between savagery and civilization is so largely one of degree and not of kind, that the story-teller is still the most potent force among men, albeit his appearance is often so sudden and his reign so short. The *word painter* has not yet ceased to be the greatest human artist, for, if ten people will buy a cheap reproduction of a *succès d'estime* in brush or pencil, a hundred will purchase the low-priced edition of the season's best romance. The whole world still loves a good story-teller,—he is vastly more personal to men and women than the most renowned painter or sculptor. Even to-day, story-telling is, as of old, one of the arms of the diplomat, one of the ornaments of the pulpit, one of the charms of the teacher. The professional story-teller is rarer than in ages past, but when he arrives, the world welcomes him with open arms; again and again does a Kipling or a Stevenson stir his race in the ancient way.

Song, too, comes down to us from the elder day. Says Miss Alice Fletcher: ''Among the Indians music envelops like an atmosphere every religious tribal and social ceremony, as well as every personal experience. There is not a phase of life that does not find expression in song.'' This is true, too, of civilized races to a very large extent,—time and time again have they rhymed themselves into ethical conduct, social harmony, religious contentment. In our day the vogue of a Kipling proves that the art and the love of it are yet alive among men. How near the heart of the childhood of the individual lies to the heart of the race's childhood appears from the investigations of Miss Gates and others who have recently studied the phenomena of music and song among school-children in various regions of the globe.

Miss Wiltse, one of the pioneers of "Child Study," long ago made an appeal for a wider recognition of the story in the education of the young, and some fifteen years have elapsed since the appearance of her book of stories for school purposes. To-day the volumes of stories, myths, legends, etc., "adapted" for school use, increase in size and in number, though not so much in quality. There is also a plentiful crop of stories for children "written by children and illustrated by children," dismal failures some of them, and justly so since the ethnic life-giving power is absent from them altogether. A few of them, however, are chips of the old block, able to float on the tide of time. The difficulty of providing tales for telling in school, as well as the dangers involved in making education a set of continued stories or pleasing romancettes, is well illustrated by Dr. Ehrenfeld's recent volume on "Märchen" for the school. Education may very well be "play with a deeper meaning," but the *modi operandi* of the game have not yet been wrought out.

Back of the individual singer and romancer of to-day, of other days, lies the immense and largely unexplored wealth of folk-tale and folk-song. How to utilize this for the child, for the teacher, for both, is the real live educational question. The story, the song, folk-music, even, have crept in here and there, in various disguises and under various names, but the modern school has yet to make the most in some way of the immense riches of real folk-lore that have never yet been touched, even in Germany, where the folk has never been quite forgotten in the school. The effort to give folk-literature an abiding place in the school curriculum is once more attracting general attention, particularly in Germany, where it has always had some sort of recognition and figures even in the "new plan of instruction." But there is still abroad in the land, an impression, shared in certain high quarters, that mythology and folk-lore are, after all, "heathen" and not Christian, and should be used in homœopathic doses if at all. So, at the present moment, the question of the complete utilization in the school-curriculum of the riches of folk-lore in all its branches is still a moot one. *Christlich-Germanisch* is still something to conjure by in the land of Arminius. Moreover, the classics have too firm a hold upon the gymnasium to let its doors open freely to Teutonic folk-lore,—classic tradition outweighs German patriotism. "Folk-Lore and the School" is the title of a very interesting paper by Dr. Oskar Dähnhardt, of the St. Thomas Gymnasium in Leipzig. Here the patriotic and ideal content of folk-song, the culture-historical value of the songs of the workshop and of travelling industry, the ethical significance of folk-tales, the nature-study material afforded by the lore and legend of the folk, the wit and wisdom of riddle, proverb, rhyme, and jest, the social value of popular ceremonies, festivals, celebrations, rites and customs, are pointed out and enlarged upon. All these folk-phenomena present so much that appeals to the interest, the emotions, the physical, psychical and social activities of childhood that their neglect during the school-period is nothing less than criminal. What can instill patriotism into young hearts better than the folk-stories of the heroes of the race? How can arts appeal to the interest and sympathy of the child better than as they appealed to the race itself when it was young? Then thought and deed went forth together in the first labor-songs. How can justice and mercy sooner win the suffrages of childhood, their applause for high ideals, than by the time-honored means of folk- and fairy-tale? What rhetoric and composition are better for the child than those by way of which his ancestors first grew eloquent? How can he better adorn his budding wisdom than through the inspiration of the imagery and figurative language of folk-thought? What keener, and yet kindly, wit will he ever acquire than that native to the proverbs, riddles, and jests of the folk? What rites and ceremonies can interest and employ the child more naturally and more satisfactorily than those which once fascinated the race in its childhood? What better ground-work for science than the *naïve* interest of the folk in nature, which, when unimpeded, so readily passes over into the unspoiled child? And no folk-literature, if we believe Dr. Dähnhardt, is richer in all these things than the German. Nowhere better than in Germany does folk-custom survive,—Christmas, Easter, Midsummer, Harvest, are nowhere else so richly celebrated and remembered. Some efforts in this direction, some attempts to make folk-lore fruitful in the education of the child, beyond the old-time ways, have already been put forth in Christiania, Copenhagen, Helsingfors, etc., and at the St. Thomas School in Leipzig. In Germany, as in America, the geography hour and the ancient history hours have been seized upon in many places to interest the child in the lore and legend of their own land.

As Dr. Dähnhardt has suggested, the pupils might themselves collect songs, rhymes, tales, legends, items of folk-lore and folk-thought of all kinds. Often they would be stimulated to take a permanent interest in folk-lore and develop, perhaps, real scientific genius. There is, indeed, on record, more than one example of this. Ch. Rugger, the author of "Aberglauben, Volksglauben und Volksbrauch," published in 1890, tells how his interest in the subject was stimulated some thirty years before, when, a sixth-grade pupil, he collected folk-lore data for Mannhardt, whose *questionnaire* had been distributed to the teachers. Dr. Dähnhardt, himself, has published a collection of school folk-lore, the result of inquiries at the Thomas Gymnasium in Leipzig. Here the children have already begun scientific work in helping to collect and to preserve the folk-lore of the present generation.

Dr. Dähnhardt is also the author of a very interesting collection of folk-tales about nature and natural phenomena, which appeared in 1898. He emphasizes here the value of "observation myths" (the myths that are intended to explain why a certain thing exists, why it has or has not, certain peculiarities), the *pourquoi*, as they are neatly termed in French. By means of a judicious employment of such tales, the teacher might convey a good deal of lasting knowledge to the child. Other valuable books along similar lines of thought, are Rosencranz' "Popular Superstitions About Plants," and Söhns's "Plants: Their Names and Their Place in Mythology and Folk-Superstition," the last being especially attractive and suggestive. Müllenhoff's "Folk-Lore About Nature," is also a very good book. Quite in line with Dr. Dähnhardt's plea for the recognition of folk-lore in the school-curriculum, is F. Beyschlag's discussion of "Folk-Lore and Gymnasial Instruction," in which its introduction into the higher schools is strongly advocated, the keynote of the essay being Goethe's famous lines,

> "Was du ererbt von deinen Vätern hast,
> Erwirb es, um es zu besitzen!"

Although not printed till January, 1900, Dr. Beyschlag's paper was finished in August, 1898, thus antedating Dr. Dähnhardt's article, as also a paper by Mogk, in which the question of introducing folk-lore into the schools is broached.

According to Dr. Beyschlag, the teaching of the German language, of German history, of geography and natural history, of singing and music, of classic and modern languages, etc., can all gain much from the study of folk-lore as a part of the school-course. The pupils will all receive lasting benefit from these glances into the depths of the folk-soul, where lives so much of their own genius and *naïveté*. They will develop a warm feeling for the life and poetry of the folk, a deep interest in the essentials of nature and of man, the beginnings of true science and of real religion.

The introduction of local folk-lore into the schools was strenuously advocated some years before by A. Grüllich, who holds that the *Sage* is the means by which the children of to-day can best come into touch with the spirit of the fathers. In a sense, the *Sage* is history's decking out of the home-localities for the children's sake. For their home-sense, their nature-lore, their treasures of ethical ideas, local legends and folk-literature should be heartily welcomed in the schools. Something better, too, is needed than mere Herbartianism or culture-epochism, if the *Sage* is to be a real thing of life and beauty to the child. The various merits of Thuringian and Schwabian *Sage* in relation to "Robinson," the Nibelungen and the Bible, have been discussed at great length by German writers, some of whom, in the details of their pet schemes, bury the living folk-lore in the dead interpretation. And some American writers have followed them.

Another appreciation of folk-literature in the school is that of Gräve. According to Gräve, it is the duty of the German public schools to cherish the virtues of the folk and so to preserve the best national character. No better means of so doing exists than through German folk-literature. The public school ought to be the home and the nursery of folk-literature of all sorts. Folk-tales, folk-speech, and folk-song are mirrors of German folk-character, and may be made the uplifting and idealizing force which shall work against the evil and debasing tendencies of modern materialism. Beginning with *Märchen* in the lower grades, with the *Sage* and kindred lore in the middle and higher grades, the teachers could utilize almost the entire round of folk-literature in the course of instruction. The reading books also ought to contain material to this end in appropriate amount and arrangement.

The technical treatment of Germanic mythology and hero-lore in the curriculums of the higher schools and the place of the various branches of the subject in the scheme of education are treated of by Dr. A. Zehme, of Düsseldorf, in two very recent papers. According to Dr. Zehme, one of the strongest objections urged to-day against a larger recognition of Germanic mythology and folk-lore in the curriculum of the gymnasium is that it would lead to a one-sided estimate of that culture-material, as opposed to the classic literature which is still the basis of most of higher education in Germany. Dr. Zehme defends Teutonic folk-literature from the charges made against it, that it is heathen, and neither moral nor æsthetic. With justice, he remonstrates against the fashion of pillorying Teutonic mythology as "dim and shadowy" as compared with "the bright, plastic forms" of the Greek. A considerable portion of his first paper is devoted to indicating the place and use in the school-course of the lore about the soul, elves, giants, etc. The first part of the second paper is concerned with arguments pro and con as to the right of mythology and folk-lore to a place in the curriculum of the higher schools, and the remainder to a detailed account of the ethical value of such study for culture-life, art, literature, sculpture, painting, etc.

The case for the utilization of folk-poetry in education has recently been very ably stated by Prof. H. A. Graevell van Jostenode, Belgium, whose last articles have appeared in an American pedagogical journal, published at Milwaukee, Wis., in German. The author points out how little real food for the child-mind the school-curriculums offer in comparison with mental pabulum for adults, and even when the *folk* are represented it is the ancient classic and not Teutonic lore that is most highly esteemed by the teachers and insisted upon for the pupils. All too often in the presence of Greek and Roman story the Teutonic folk-heroes are "unbenannt und unbekannt." Only by rightly using the Teutonic *fond* can pupils be made to *feel* folk-poetry, and enter really into its "poetische Unschuld." What is wanted is not the spirit of drawing-room folk-lore, of *Salontiroler*, but actual recourse to that fountain where "the folk-soul pours forth its whole feeling and willing in song,"—the poetry that is life. The poetry beside which the artificial compositions of the day seem but hot-house products. The poetry that is the wild-rose the children love, not the green-house plant they are got to admire. The folk-poetry that is a truer product of the Aryan mind than the art-poetry of a later day. Nowhere else can the child become acquainted with that peculiarly German troth with God and man, with high and low, with animals and plants, with all nature, in fact, without which life is vain and hollow. So, too, with the untranslatable *Gemüt* and the idealism of folk-literature. There is no one who has listened to the blind South-Slavonic singers of folk-songs, or to their Germanic peers, but has felt moved to declare "the sun of Homer smiles on us still." There is all, and more than all, of the good in classical literature in Teutonic and Slavonic lore and legend. Nor are the old folk-melodies to be neglected; the charming ballad dances, such as survive even now in the Faroe Islands and other places within the Germanic and the Scandinavian area. The singing of these old folk-songs in the schools cannot be without its good effect. Teutonic and Scandinavian, *folkeviser* are full of deepest significance for the growing child, and they far outweigh the artificialities of the pedant still so much in vogue.

In several of his earlier publications, especially in his "Classical or Popular," published in 1896, Prof. Graevell van Jostenode has given expression to this belief that modern education needs the folk-spirit and not the pedant-soul; the poet of all poets is the folk, and the child lies close to him. Another recent and suggestive contribution to the subject is Muthesius's recent little book on "Childhood and Folkdom," in which the author, while not advocating the adoption of folk-lore as a special branch of the school-curriculum, insists that the teacher should be educated in "folk-lore" and bring to his profession all that the individual can reap from the rich and inspiring soul of the race. According to Muthesius, a folk-hearted teacher, with the lore of the people at his command, is rather the ideal than the creation of a new department of the curriculum.

Doctors, it would seem, differ here as elsewhere, but those who would cultivate folk-lore for the sake of the child, seem now to have the best of the argument in Germany, as they have had it also for some time in America, with the able support of President Hall, Dr. Paul Carus, etc. But it is the live folk-lore we must have, not the dead, the heath-rose and not the hot-house lily.

Foremost among the leaders of the movement to make the folk-spirit effective in German education, to fertilize the school with the deep streams of "Teutonismus," instead of the artificial canals of classical "Pedantismus" was Dr. Rudolf Hildebrand (1824-1894), whose whole life and thought, whose speech and whose writings, were the expression in the individual of the life and activity of the folk in its highest and noblest significance. Philologist, poet, philosopher, man of science, and teacher, all in one person, he was one of the "makers" the result of whose labors the next century will surely reveal. His "Contributions to German Education," published, after his death, in 1897, contain, perhaps the most telling arguments ever advanced for the educational utilization of "folk-lore," in the real sense of the term. It will be largely owing to his influence that the ideal of Hermann Grimm will one day be realized, and German youth who have so long become acquainted with their own land only through Italy and Greece, come to know Italy and Greece through Germany. Then will begin the real "German Period," whose advent has been so long delayed, but whose appearance will be as glorious as any "Renaissance" the world has ever seen. To unite the modern scientific spirit with the folk-spirit is the real problem of education. In Hildebrand, the individual, this was in great part accomplished, and the people to whom he belonged will as surely accomplish its part of the task. "Folk-Lore" is thus destined to be the great resource, which the nations of to-day, after they have exploited materialism to the full, will perforce use for their educational salvation. This is the real *vox populi vox Dei.*

BIBLIOGRAPHY.

So scattered are the few titles upon the subject of "Folk-Lore in the School," that those here given may, perhaps, prove useful to any one wishing to go into the matter in greater detail than the present writer has desired to do. The special Herbartian Culture-Epoch literature is not included.

1. BEYSCHLAG, F. Volkskunde und Gymnasialunterricht. Ztschr. f. den deutschen Unterricht, Vol. XIV (1900), pp. 1-41.
2. CARUS, P. Santa Claus. The Signification of Myths in the Religious Instruction of Children. Open Court (Chicago), Vol. XIII (1899), pp. 45-50.
3. —— ——. Religion in Fairy Tales. *Ibid.*, Vol. XIV (1900), pp. 176-184.
4. DÄHNHARDT, O. Volkskunde und Schule. Ztschr. f. den deutschen Unterricht, Vol. XIII (1899), pp. 1-13.
5. —— ——. Naturgeschichtliche Märchen aus Nah und Fern. Leipzig, 1898.
6. —— ——. Volkstümliches aus dem Königrrich Sachsen. Auf der Thomasschule gesammelt. Leipzig, 1898. pp. v + 156.
7. DANNHEISSER, E. Die Verwendung des Dialekts im Unterricht. Programm der Realschule von Ludwighafen, 1899.
8. EHRENFELD, A. Schulmärchen und andere Beiträge zur Belebung des deutschen Unterrichts. Zürich, 1899. pp. vi + 136.
9. FLETCHER, ALICE C. A Study of Omaha Indian Music (Arch. and Ethnol. Papers, Peabody Mus., Vol. I, No. 5). Cambridge, Mass., 1893. pp. vi + 152.
10. GATES, FANNY B. The Musical Interests of Children. Journal of Pedagogy (Syracuse, N. Y.), Vol. II (1898), pp. 265-284.
11. GÖPFERT, A. Thüringer Sagen. Jahrbuch des Ver. f. wiss. Pädag., Vol. XX (1888), pp. 201-234.
12. —— ——. Verwerthung der deutschen Sagen, speziell der Thüringischen, im Unterricht. *Ibid.*, Vol. XIX (1887), Erläut., pp. 34-49.
13. —— ——. Sage im Unterricht. Rein's Encyclop. Handb. d. Pädag., Vol. VI, pp. 40-47.
14. GRÄVE, A. Die Pflege der Volksdichtung und ihre Bedeutung für die heutige Zeit (Samml. Pädag. Vortr., VIII, Bd. Heft 1). Bielefeld, 1896.
15. GRAEVELLE VAN JOSTENODE, H. A. Klassisch oder Volkstümlich. Leipzig, 1896.
16. —— —— ——. Volkspoesie in der Schule. Pädag. Archiv. (Leipzig), 1897. pp. 27-36.
17. —— —— ——. Christlich-Germanisch. 3te. Aufl. Leipzig, 1899.
18. —— —— ——. Die Volkspoesie im Unterricht. Pädagogische Hefte (Milwaukee), Vol. I, (1900), Heft 3, pp. 6-16; Heft 5, pp. 10-13; Heft 6, pp. 5-13; Heft 8, pp. 24-29; Heft 9, pp. 19-22.
19. GRÜLLICH, A. Die Berechtigung der Sage in der Volksschule. Sächsische Schulzeitung, 1894, No. 5.
20. HARTLAND, E. S. The Science of Fairy Tales. London, 1891. pp. viii + 372.
21. HILDEBRAND, R. Beiträge zum deutschen Unterricht. Leipzig, 1897. pp. x + 446.

22. Jetter, J. L. Schwäbische Sagen im Lehrplan der Erziehungsschule. Jahrb. d. Ver. f. wiss. Pädag., Vol. XXIX (1897), p.p 229-269; Vol. XXV (1898), pp. 130-148.

23. Mogk, E. Deutsche Volkskunde. Neue Jahrbücher für das klassische Altertum, Geschichte u. deutsche Literatur und für Pädagogik (Leipzig), 1899, pp. 62-76.

24. Müllenhoff, K. Die Natur im Volksmunde. Berlin, 1898.

25. Müller, C. Die Verwerthung der Redensarten im Unterricht. Zeitschr. f. d. deutschen Unterricht, Vol. V (1891), pp. 88-119.

26. Muthesius, K. Kindheit und Volkstum. Gotha, 1899.

27. Pearson, K. Chances of Death, and other Studies in Evolution. 2 vols. London, 1897. See Vol. II, pp. 51-91.

28. Petit, E. La fête de l'adolescence. Revue pédagogique (Paris), Vol. XXXV, n. s., 1899, pp. 19-210.

29. Rein, W. Outlines of Pedagogics. Transl. by C. C. and J. J. Van Liew. London, 1893.

30. Rosencranz, C. Die Pflanzen im Volksaberglauben. Ein Beitrag zur Pflege des Volksthums in Schule und Haus. Kassel, 1893.

31. Schullerus, A. Volkskunde. Rein's Encyclop. Handb. d. Pädag., Vol. VII, pp. 455-460.

32. Söhns, F. Unsere Pflanzen, ihre Namenserklärung und ihre Stellung in der Mythologie und im Volksaberglauben. 2te. Aufl. Leipzig, 1899. pp. 134.

33. Spencer, F. C. The Education of the Pueblo Child (Columb. Univ. Contrib. to Philos., etc., Vol. VII, No. 1). New York, 1899. pp. 97.

34. Wiltse, S. E. The Place of the Story in Education, etc. Boston, 1892.

35. ——. Stories for Kindergartens and Primary Schools. Boston, 1885.

36. Zehme, A. Zur Stellung der Germanischen Mythologie im deutschen Unterricht. Zeitschr. f. den deutschen Unterricht, Vol. XI (1897), pp. 188-205.

37. ——. Zur Behandlung der Germanischen Heldensage und Mythologie im deutschen Unterricht. *Ibid.*, Vol. XII (1898), pp. 695-735.

NASCENT STAGES AND THEIR PEDAGOGICAL SIGNIFICANCE.

By E. B. Bryan.

Introduction.

The general aims of education may be classed under two heads: (*a*) Those that emphasize the individual. (*b*) Those that emphasize society. There are those who hold that if all the latent powers of the child, mental, moral, and physical are developed fully and symmetrically with entire emphasis upon him as an individual, we not only get the best individual product possible in a given case but the best social product as well. On the other hand there are those who hold that inasmuch as the child is born of society, is a member of society, and is becoming more and more a potent member of society, his training should be given him with a view to the needs of society rather than to his individual needs, believing that thereby not only is the best social product assured but also that the best has been done for the individual as such.

There is truth in both these thoughts, and when they are reduced to their lowest terms, we have simply a question of relative emphasis of two fundamental factors in the aim of education. But whichever phase is emphasized, this surely is true, that any attempt at curriculum making or educational procedure which does not take into account the laws and stages of the development of the one to be taught, is apt to go wide of the mark and induce arrested development either by holding the child to work which belongs to a lower stage of development or by rushing him on precociously to work which presumes a development which he has not yet attained.

Therefore, from whatever standpoint we view the aim and problem of education, a knowledge of the stages in the development of people, of the abrupt turns and the deep places in the stream of human life, of the nascent periods, so to speak, of human development is of prime importance.

In educational literature many hints of the importance of such knowledge are found, and much of the work done in schools and colleges is purported to be based upon such knowledge; and yet, with the exception of the periods of pubescence and adolescence, it must be admitted, I think, that our information has been very vague and limited and that the ground on which we have stood has for most part been only a feeling, variable as individuals are variable, that such and such things are true.

In general literature, the thought that human life is not an unbroken continuum but rather moves in great beats or stages is quite pronounced and dates back to very ancient times.

An historical study of religious ceremonies performed at certain ages shows how deeply the idea has worked itself into the religious consciousness. A brief but careful study of the contemporary religious consciousness has revealed the same thing, and the special studies upon conversion, backsliding and other religious phenomena bring out the same results.

The change of seasons, the succession of crops, special days for special things, all emphasize the thought that there are certain times that are peculiarly fitted for certain things.

The old faculty psychology dividing the mind, as it does, not only into intellect, sensibility, and will, but also into the chronological apartments of perception, memory, imagination, judgment, reason, etc., while largely the result of speculation, is doubtless to a degree both the result of this folk-consciousness and also a potent cause for the tenacity with which the educational world at large clings to the idea of successive stages in development.

Teachers and students have experienced that some things come comparatively easy in early years and other things in later years, and consciously or unconsciously arrive at the conclusion that there should be an adaptation of the kind and amount of work to the stage of development; *i. e.*, that certain times are ripe times for certain things.

A limited number of experiments upon animals, together with every day observations, tend very strongly to confirm this thought. The results of Spalding's (35)* work with the chick re-enforce the thought and James (20, Vol. II, p. 398) brings out the same thing in his chapter on Instinct.

Returns from two thousand teachers emphasize very strongly the fact that if children at certain times have a longing for, or show an aptitude in Drawing, Music, Manual Training, Athletics, etc., but are deprived of the opportunity for culture along these lines, they are apt to lose their interest or aptitude or both.

It is thought that children who become blind before a certain age are not apt to have visual images, while those who become blind after that age are apt to have visual images. The same thing is supposed to be true of the other senses, notably the sense of hearing.

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*The figures in parentheses refer to similar numbers in *Authorities Cited* at end of the article.

Donaldson (14, p. 37) says: "Development and the changes involved in growing old, are by no means synonomous, so that although in those animals with a fixed size there are always to be found undeveloped cells, yet it is not a correct inference that these cells are also young in the sense that they might still complete their development. It appears, rather, that the capacity for undergoing expansive change is transient, and that those cells which fail to react during the proper growing period of an animal have lost their opportunity forever."

The studies that Barnes (3) has made of children's interests show that the things in which children are apt to have a lively interest vary with age.

All of these things point to the possibility of more or less definite stages or nascent periods in development, and the purpose of this paper is to collect and formulate the evidence for such a theory in its application to human development, and to make pedagogical deductions from this evidence.

Hartwell (17) divides the first twenty-five years of life into four stages (1) Infancy from birth till the first dentition. (2) Childhood, from the first to the second dentition at seven or eight years of age. (3) Boyhood or Girlhood, from second dentition to puberty at thirteen or fourteen years of age. (4) Puberty and Adolescence, from thirteen to the beginning of the twenty-fifth year.

Lange (23) has four stages. (1) From birth to two years, highest rate of growth. (2) From two to twelve years, decreasing annual increments. (3) Twelve to fifteen years, mental growth. (4) Fifteen to twenty-one years, a sudden decrease in annual increments.

Zeissing (7, p. 255) found three stages. (1) One of decrease in the yearly increments of growth up to nine years. (2) Increase of yearly increments to the seventeenth year. (3) A later decrease.

Vierordt (7, p. 325) has seven stages. (1) From birth to eight months. (2) From eight months to seven or eight years. (3) From seven or eight years to fourteen years. (4) From fourteen or fifteen to twenty-one or twenty-two. And then early adult, later adult age to the sixtieth year, and old age. Clouston (11) divides the years of development into three stages. (1) From birth to seven. (2) From seven to thirteen. (3) From thirteen to twenty-five.

That there are varying rates of growth in the development of a child has been established beyond question. There is the seasonal rhythm now slow now fast, there is the variation due to nutrition, variation due to disease, and variation due to increase of function; so that the curve of development is not a straight line.

Also, it is pretty definitely known what an average child (if such a thing there be) is capable of at a given age. (We know, for example, that it does not walk and talk at six months but that it does at thirty-six.)

Special studies upon individual children have made much more definite the general notions of the unscientific but sympathetic observer of children. So that we have a vast amount of unorganized data for the work scattered here and there covering the entire developmental period. It is no part of the purpose of this study, therefore, to redemonstrate that the curve of life is a broken and not a straight line or even to make a contribution of new data. It is rather a work of organization and interpretation of facts worked out by various observations, researches and experiments with a view of finding what truth and significance there may be in the theory of nascent periods; what these nascent periods are in themselves; and what relation they bear to one another. For a convenient résumé of the many theories concerning the periods of childhood the reader is referred to Dr. Chamberlain's book on *The Child* (8a pp. 51–105).

The hope of fixing hard and fast limits for each or any of these stages is not entertained; the limits will vary with individuals as everything else does. But it is the hope to show on physiological and psychological grounds that in the development of the child there is a series of periods each more or less homogeneous in itself, but widely different from all the others, that each period serves as a propædeutic to the one that follows and that each is preceded by a relatively short transitional period characterized by mental and physical disturbances which serve as the time for rearrangement and preparation for the stage which is to follow. I wish then, in the light of what is found to be true of these periods, to make deductions of some the more obvious pedagogical principles.

I.

INFANCY.

Following the months of pre-natal existence, comes birth with the first days of life's experience. Psychically, there come rolling in upon the child floods of sensations, meaningless in most part and of no present value to him. "All its senses," says Perez (27, p. 8), "are battered by repeated shocks of strange impressions, and it's wailing cries indicate how painfully these are felt." I think it questionable, however, whether the cries are due so much to the feeling of pain or whether they are merely reflexive. Clouston (12) I think, comes nearer the truth than Perez when he says that, "At birth a child is absolutely destitute of mental faculty. The thing does not exist. All competent observers agree on this point; and all newly-born children are equally mindless. There is no exception. But why does the child cry, and seem to feel pain, and move, and feed himself? Those at first are all automatic, or reflex actions unaccompanied by mind, the apparatus for performing which in the brain and spinal cord, is almost perfect at this time, while the mental apparatus is undeveloped. He breathes, too, as well as ever he will do, just because the group of nerve cells in the brain that produces and regulates the breathing movements is perfect at birth."

To quote the much used expression of Prof. James (20, p. 16) "The object which the numerous inpouring currents of the body bring to his consciousness is one big, blooming, buzzing confusion. That confusion is the baby's universe."

Physically, during the first week of life, the child looks like itself no two days in succession; it readjusts itself to the new environment; it breathes, it takes food through the mouth, every sense is appealed to by outer stimuli, a change in movement is possible, and the child becomes less plump and loses in weight. Perez (27, p. 10) says: "Up to the third day there is a diminution of between three and four ounces in their weight, and it is not till the sixth or seventh day that they get back to what they were at birth."

Bayard Holmes, M. D., (19) says: "During the first three or four days after birth there is a normal loss of weight of between 6.15 and 6.96 per cent. The average loss of weight is 222 grammes. This is followed by a rapid increase in weight, which is greatest during the second month."

It seems, therefore, that the first few days of the child's life are not a continuance of the pre-natal development, but serve rather as a transitional period, characterized by various psychical and physical disturbances, of readustment, and preparation for the stage which is to follow.

For some months following these earliest days, if the child be normal, there is a gradual development—not a development due so much to its reactions upon outer stimuli, but rather an unfolding of its life, the child remaining for most part passive in its relations to the outer world, being receptive rather than expressive.

By way of food, clothing, etc., it takes what is given it, its only means of expressing its disapproval being more or less unintelligible mimetic gesticulations and crying. During the first months it cannot balance its head; it cannot sit, nor stand; it cannot roll over, creep, walk, run, jump, or climb; it cannot talk; it cannot eat. Its ability as an aggressor is nil. Nevertheless its power to react, to express itself both mentally and physically, is increasing so that at the end of the third or fourth month it can balance its head; in a few more months it can sit alone, can roll over, and is beginning to creep; and in most cases, by the end of the first year, the child is creeping as well as it ever will; it is beginning to stand, is trying to walk, and climbs whenever an opportunity is afforded.

It is no longer unable to see as at birth but has its senses of sight and hearing developed, so that on the one hand by the time it attains its first year, its visual accommodation is perfect; it looks away at objects and has pleasure in seeing people and things. On the other hand, its sense of hearing develops from the fourth day when it is able to hear a sharp noise, until at the close of the first year, it not only hears a noise at a distance but adjusts its head to catch the sound. (28 for fuller discussion.)

During this time the senses of touch, taste and smell have kept pace with the sense of hearing and sight, so that from the physical standpoint, the child is freeing itself from its passive condition at the time of birth and is becoming more and more capable of an active life. In language, which has both psychical and physical factors, the child during the first year or year and a half, has made sufficient start to make his most common wants known; it distorts its words in many ways, is incapable of speaking in sentences, and finds it necessary to supplement and to re-enforce its oral language with all kinds of gesticulations which are as unskillful as the language itself. It has reached that stage where it is "beginning to talk."

We have no evidence that in the first months of a child's life it does constructive mental work; it does not plan and project, it does not arrange means for the accomplishment of preconceived ends; its mental life is not one of expression. It has sentiments of taste, fears and anger, animal and human sympathies, and often shows signs of affection; it frequently manifests presence of will; it is capable of slight attention; and it can imagine, remember, and associate. Perez thinks that very young children are capable of elaborating ideas in the form of judgment, abstraction, comparison, generalization, etc. However this may be, it is evident that they are not capable of consecutive thought and are not constructively effective. To use the words of Dr, Lukens (25), "Beginning with the period of almost pure receptivity and open-mouthed wonder and delight in the senses, the child very soon, however, begins to react and, as Froebel says, to make the internal external. In most children, for instance, there is a more or less clearly marked period lasting from a few weeks to several months, during which they understand nearly or quite all that is said to them but have not themselves begun yet to speak."

In the Neuroses of Development, Clouston (II, p. 8) says:

"Sensation, common and special, come next soon after birth, and we have reason to believe that its peripheral, receptive apparatus and brain centers rapidly acquire perfection, though its future mental interpretation is a gradual and slow process. Most of the motor processes are more gradual in coming to perfection, and, indeed, cannot be said to have arrived to that stage till adolescence is nearly completed."

One may safely say, then, that during these first months(12 or 18) the sensory side of the child has developed much more rapidly than the motor side. It has been appealed to in a thousand ways; it has been awakened, but for most part it has been a recipient in a telling way, but not an effective actor. Its chief business has been to grow and not to act. This is shown by the fact that at the end of the first year the child should be three times as heavy as at birth and half as heavy as it will be at seven years of age (30). Its increase in height the first year will never be equalled in any succeeding year. The increase in brain weight should be five times as great (381 grammes, 945 grammes) as for any succeeding year.

On an average, the growth of the brain the first year is equal to more than one-third the entire weight at maturity (37).

It is important in this connection to know that out of every one thousand children under one year of age, two hundred twenty, or 22 per cent., die annually. "When we realize that the mortality from typhoid fever is less than ten per cent. of the individuals affected, and that the mortality during the first year of childhood is over 20 per cent., and therefore, infer that it is just twice as dangerous to be an infant under one year of age as to have typhoid fever, some idea of the delicacy of the individual at this period of life may be obtained." (10.)

The child's chief business, then, is to keep alive and grow.

The pedagogic question is, what are the best things that can come into the life of the child during these earliest months? Inasmuch as growing is its chief function, all the conditions for normal growth should be observed and all the causes of arrested development averted.

There should be no crowding; there should be little restraint and all undue excitement should be avoided, lest the delicate nervous system be irremediably shocked. One of the prime conditions of normal growth is a sufficient amount of wholesome food, but at this stage the variety of food should not be great if indeed it should not be limited to the one kind which nature has expressly provided. The child is unable to properly prepare solids for digestion and they should be kept from it until it is provided with teeth and proper strength to use them effectively; and until the alimentary processes are confirmed. Another condition of normal growth is a sufficient amount and proper kind of clothing; many babies are smothered out of their wits and frozen out of their growth. Cleanliness, sunshine, and an abundant supply of fresh air are prime requisites. It is known to every one that diseases and traumatisms interfere with the growth of the child and often cause permanent arrest of development; a judicious amount of care should be exercised to prevent disaster from such causes. Only such things as are conducive to the child's good health should be observed during these first months.

Its development, always in pulse beats, should, however, in the first months have no abrupt turns but should be a continuous wave line—a rather steady and uniform movement. This is the stage of infancy.

II.

Transition from Infancy to Childhood.

Then comes at a year or a year and a half of age (the time varies greatly with individuals) another transitional period of disturbance and readjustment. The child creeps or walks; it gesticulates or talks; it is having its second summer; its temporary teeth are coming; it is taking new food; it is passing from the stage of gastro-enteric diseases to the stage of infectious diseases; there is great change in its anatomical proportions. It is breaking away from the quiet receptive stage of the infant and is becoming aggressive, as is shown in its impulse toward migration so well brought out by Kline (22), so that when the transition is finally made, it no longer waits and passively receives what is brought to it, but goes after what it wants. It can climb and walk and run; it no longer waits until its mother bare her breast to gratify its hunger, but eats many things and has teeth with which to eat; it no longer makes known it's wants by grunts and vague gesticulations, but uses language for this purpose.

"From birth when the brain weighs about fourteen ounces up to two years when it has attained twice and a half that weight, there has been a series of new evolutions or creations of new faculties. After that there takes place a gradual perfecting of those faculties (12)."

"During the first two years of life, says Dr. Christopher (10), the child, as a rule, possesses a considerable deposit of adipose tissue. As he passes the second year of life and enters the third there is considerable change in his anatomical proportions. He grows in height and loses rotundity and plumpness, and passes quite rapidly from a period recognized as that of childhood. From then on the dangers to the life of the individual from factors in direct relation with its growth and development are not so great as before. Then comes the period of infectious diseases."

Thus, the child has moved out of the purely receptive stage of the infant, through a period of disturbance, into the active stage of childhood at about the close of the second year.

In Miss Shinn's observations (33, p. 411), the child's first successful attempt at creeping was at the age of nine months; at standing, the close of the ninth month; at climbing, eleven months; at walking, twelve months; at running, the close of the fourteenth month.

In Prof. Preyer's observations, the child's first successful attempt at creeping was at the thirteenth month; at standing, the close of the ninth month; at walking, the sixteenth month; at running, the sixteenth month.

In Mrs. Hall's observations, the child's first successful attempt at creeping was at the age of thirteen months; at standing, twelve months; at walking, fourteen months.

In Mrs. Beatty's observations, the first successful attempt at creeping was at the age of nine months; at standing, eleven months; at climbing, twelve months; at walking, fourteen months; at running, sixteen months.

In Miss Shinn's observations, the habit of creeping was complete at the age of ten months; of standing, twelve months; of climbing, at the close of the eleventh month: of walking, thirteen months; of running, fifteen months.

In Prof. Preyer's observations, the habit of creeping was complete at the age of fourteen months; of standing, at seventeen months; of walking, at eighteen months.

In Mrs. Hall's observations, the habit of creeping was complete at the age of fourteen months; of standing, at fourteen months; of walking, at sixteen months.

In Mrs. Beatty's observations, the habit of creeping was complete in the tenth month; of standing, at sixteen months; of walking, sixteen months; of running, at nineteen months or later.

III.

CHILDHOOD.

The development of the child from this time up to the seventh or eighth year, while not precisely the same during any succession of months or years, will be marked by no decided turns. The annual increase in height and weight will not vary greatly, but there will be a steady growth in both these directions, very much less rapid than in the first year, and less rapid than during the years that immediately follow this stage. The child is becoming more and more active, but owing to a lack of development of the peripheral muscles and the nerves that control them, his movements are unco-ordinated so that he is not effective as a producer, and activity is its own excuse for being.

Special sense education and the development of language continue at a rapid rate; the brain grows rapidly and approximates its full weight at the age of seven or eight. The sensory side is still in advance of the motor, but the child is by no means receptive only. His activity resulting in no outer product of value, finds its immediate value in itself, and so this is the stage of play. His keen sensory side catches up every suggestion, so that this is pre-eminently the stage of suggestion and imitation.

He gets most of his information first hand through the senses; further than this his mental life is made up chiefly of reproduced images and crude products of the imagination, although he is capable of carrying on many of the higher mental processes in a simple fashion.

Unless spoiled, the child at this age knows no such thing as shame, or modesty; it is apt to be selfish and fond of teasing and bullying as has been so well shown by Burk (6). His notions of right and wrong are not clearly defined and are very vacillating. Any hint of a moral code that he may possess, is not of his own making but has been impressed upon him from without through suggestion rather than by precept.

As in the former stage, growth was the prime desideratum, so here it is the thing of chief importance; not so much a quiet unfolding of the latent powers of the child as in the first stage, but rather a development through activity. But it must not be forgotten that the benefit derived here from the activity of the child is to be found in the child and not in the thing he does.

" During the period of brain growth in bulk up to the seventh year, when the full size and weight are almost attained, nutritive influences are of the largest value. How far this can reach positively, needs future demonstration, but is rich in promise; how far negatively, is well understood, but receives as yet insufficient support. There are during these early days more formative power and less output of energy exhibited." (36.)

All of the essentials for normal growth in the first stage should be diligently observed here as well. Nutrition, cleanliness, sunshine, fresh air, and care to prevent arrested development from diseases and traumatisms. But in addition to these things, there arises here the pedagogic problem of positive training, physical and mental.

The first question, of course, is this: Should the child receive any systematic training during this stage, or should we simply observe the foregoing conditions for growth and keep hands off?

This much can be said in regard to this question,—biology and psychology tell us that what one can do at any given time depends more or less upon what he has been doing; *i. e.*, the life of one stage is determined by the life preceding this stage. From about two up to seven or eight the child is acting and reacting. He is giving himself his first kinks and turns. He is laying out the lines for his future automatisms and driving the stakes. His style of sitting, walking, speaking, throwing, etc., his style of reaction to authority, his style of social reaction, are all becoming defined and taking set during these plastic years. The lines are being laid for the child or against it whether it will or not. Enough care and systematic training, and no more, should be given during this stage as will assure the best approach in all of these lines to the years that are to follow. (The essentials for such guidance are *sensible* sympathy and a rare fund of insight and self control).

Where we do not know, the watchword should be "hands off." But the most common-place teacher or parent does know that if a child sits "humped up" the first years of its life the chances are that it will never sit erect; if it is allowed to fly into a fury and scream and tear its hair during these years, the tendency later on will be to do something worse; if it does everything in a slouchy, careless, half-finished way, with great difficulty will it ever learn to do them in any other way. If it is allowed to lie and steal with impunity, it will develop into a thorough-going liar and thief. Concerning these and similar things the child should not be allowed to develop at random. Who knows more, can do more; who knows less, should most assuredly do less. In a word, then, our motto for this stage should not be "hands off" but rather this: a better knowledge of child life, and greater sympathy with it, so that we may be able to know how and when to lay hands on.

Let us notice a second question—If the child is to receive more or less systematic training at this time, what should it be?

It has already been observed that during this stage the child's keen sensory side catches up every suggestion, so that on the one hand this is the stage of suggestion and imitation. This is one of the keys to the solution of the problem. Another key is to be found, I think, in the fact that this is pre-eminently the play stage. We have here a hint at both matter and method. (1) The greater part of the child's activity and, indeed, all of it at the beginning of this stage, should be play and not work. (2) Work should be only introduced gradually in proportion as the child develops in mental and physical control. (3) The child should not be held for a perfect piece of objective work.

In regard to method, but two things can be said with any degree of definiteness. (1) Suggestion should play an important role. (2) The spontaneity of the child should have full freedom.

This gives us a basis for the discussion of these two practical questions: *a*. What things may be taught the child at this time? *b*. How should they be taught?

It would require many volumes to discuss the merits and demerits of the entire catalogue of subjects, so the purpose here will be merely to touch upon enough things to bring out the thought and illustrate the principle.

Let us make the application to the child's play, work, and conduct.

Play. If play is to serve its highest end, it must be play in the highest sense spontaneous for most part, free from outer direction and careless of ends. Play under close supervision is a self-contradiction—it not only defeats the ends of play but ceases to be play. Parents and teachers need to remember that to require children to play according to prescribed formulæ means to have them quit play and go to work, and at the same time robs them of all the benefit of the initiative; and that thereby the main avenue of approach to the child's life is closed. It is a matter of common observation that to know a child, or any one else for that matter, he must be free to live his own life. This free living of the child is his play. It is commendable in parents to join in the plays with their children, but if they do so they must do so for most part at the suggestion of the child, and play the part the child would have them play in a way he would have them play it. Kindergartners and teachers in elementary schools would do well to observe the same thing. To call work play, does n't make it play, and any performance planned and closely supervised by the teacher, however attractive it may be in itself, realizes less in play results than in work results. This suggests the amount of freedom and spontaneity that should characterize the school plays of this early stage whether within or without the school room. If the kindergarten emphasizes play as an element in its curriculum, it must not be tardy in recognizing what are the essential elements of play. Furthermore, Sheldon (32) and Gulick (16) have shown that during these years children do not take kindly to organized play or so-called team work, and when inveigled into it are very unsuccessful. It must not be forgotten that during these years, the accessory muscles are not under good control, that movements are uncoordinated, that the child is not effective as a producer, and that activity finds its own immediate value in itself. Co-operation is essentially a work factor and not a play factor; and, this being pre-eminently the play stage, the child is not successful in co-operative games. Ample opportunity for *unorganized*, *unhampered*, *spontaneous activity* on the part of every child should be the play ideal of every kindergarten and elementary school.

Work. In considering the work appropriate to this stage, some things need to be restated as a basis for discussion. First, that the end of work is a definite product—physical or mental. Second, that this is the stage of imitation and suggestion *par excellence.* Third, that the accessory muscles are not under good control. Fourth, that the child's mental life is made up chiefly of percepts, reproduced images, and crude products of the imagination.

Taking them up in the order named, the child should be required to do only those things for which it has a fair degree of efficiency, otherwise, the end for which work is intended is defeated and through the force of habit a positive injury may come to the child. But those things for which he does have a fair degree of capability, he should be required to do. For, if it be true that at this time all work and no play makes Jack a dull boy, it is also true that all play and no work makes Jack a mere toy. The principle is equally applicable in the fields of mental and physical work.

In making pedagogical deductions from the second point, viz., this is pre-eminently the stage of suggestion and imitation, it need only be said in passing that both common observation and psychological reasearch have shown that this is true. (1: 2: 15: 18: 34.)

What the child gets through suggestion at this stage amounts to infinitely more in every way than what he gets in the form of precepts. To illustrate,—Neither formal grammar nor even language lessons are necessary to insure good usage on the part of the child that has lived among people who speak correctly; and no amount of both will insure correct usage on the part of the child that is not so situated. A year's change of residence served to alter in every way the pronunciation of two children aged three and six whose parents were entirely unaffected. Such cases could be multiplied indefinitely. In fact, suggestion and imitation are the basis for the development of language both in the race and the individual, and should be the chief and, aside from incidental correction, the only means of helping the child in his language at this time. Let the child hear correct usage and as soon as he is able to read let him have access to a variety of well written story books, and he will be helped infinitely more than by any amount of formal instruction. The latter method of helping the child not only fails in its purpose but even does positive harm inasmuch as it prematurely brings him to a consciousness of his own mistakes and of errors of which he would otherwise happily remain entirely ignorant. The language ideal at this time is saturation in good forms. Let the eye and especially the ear feast upon good language but never make the child acutely conscious of the fact that this is good and something else is bad. An acute consciousness of good usage is only second in harmfulness to an acute consciousness of bad usage. This is the ripe age to give the child a start in the foreign languages providing he is so situated that he may apply both eye and ear to the work. If those with whom he associates use the foreign language, and if the literature at his disposal is written in this language, almost as easily will he at this time learn this language as he did his mother tongue. But, if he hears the mother tongue only or mostly, and the foreign language in the class-room only, it would perhaps be better to defer the work till a later stage. (See p. 389.)

In the second and third points we have ground for determining the nature of the manual work suitable for this stage.

Since President Hall's first lectures upon the subject some years ago, and the publication of Burk's work ('96) on the development of the nervous system from fundamental to accessory, many kindergartners have very wisely discarded work which requires fine movement and delicate adjustment such as fine needle work, work upon delicately perforated cardboards, laying of small sticks, etc., and have harmonized their requirements in writing more with the facts of modern physiology and psychology, by making greater use of the board and allowing children to do this work on a larger and freer scale in every way. The effect upon drawing has been equally wholesome and this, together with the facts brought out by Lukens and Barnes, gives a pretty safe basis for determining the work in this subject at this stage. The researches of Ross (31, p. 83), Bryan (5) and Burk (8) indicate that from the standpoint of physiology and psychology, the work in drawing at this time should be just what Lukens (24) and Barnes (3) have found it to be when the child is unhampered and left perfectly free to express himself. The former have shown that there is but little peripheral control at this time but with proper practice control may be developed rapidly toward the close of this stage at seven or eight years of age, while the latter have shown that the earliest drawings of the child are apt to be mere scribbles. The former have shown that the child is incapable of fine movements and delicate adjustments, but can easily make larger movements, and the latter have shown that after the scribble stage the child naturally draws with a few large telling lines making the drawing quite simple. Lukens agrees with Barnes in his thought that this is the time for the alphabets of drawing but that the technique or grammar of the subject should be deferred till a later time, say about the ninth year, and Mr. Henry T. Bailey, in the Massachusetts Report of the Board of Education, ('94-'95) says that "if the power to draw is not acquired before the end of the ninth year, it is not acquired in the public schools.'' (29.)

Inasmuch as the purpose of this paper is to set out in relief the stages in child development with some of the more obvious pedagogical deductions only, the subject of drawing as such cannot be discussed fully — merely some of the primal facts that will serve as guides in working out the details. As the ideal at this stage on the side of physiology and psychology should be not so much a definite product but rather a bridging over from the unorganized, uncontrolled movements at the beginning of this stage to a higer degree of mental and physical co-ordination and control at its close, so at this time the ideal in drawing should be not so much one who can draw, but rather a movement away from scribble to plain definite lines whose combinations have more or less meaning. (Great care should be taken to avoid arrest of development either from crowding, retardation, or reversion.) Inasmuch as suggestion plays so important a role at this time, ''interest in drawing should be early developed by giving children access to an abundance of good pictures, illustrated books, magazines and plates of great men, great scenes; and great sculptures, paintings and edifices. These helps are of the utmost importance in all art education, and should be in the environment of the child from the beginning. Drawing thus becomes a pleasure to children, and they acquire considerable skill without any instruction.'' (24.)

The general principles in a rational course in Drawing would serve equally well in other lines of manual work. Local conditions will be a determining factor in the technique of all of this work, but not in the principles underlying it. And, in all of the manual work up to seven or eight years of age, the spontaneity of the child should be allowed to assert itself. In many cases other forms than drawing will be taken up. Instead of drawing many children take to paper cutting first, and follow this with drawing. I have seen the pictures of animals, cut by a boy seven years of age, so true to life that even the mental mood of the animal could easily be detected. Although the pictures in themselves were plain, the conception and execution were that of a potential artist. This work for him was, above all things else a mode of expression, just as speaking, writing or drawing are for other children. It was followed by coloring and writing with unusually rapid progress in both. It is difficult to guess what the results would have been if this child at the age of four or five had been required to conform to a cut-and-dry course of manual work. But we can not take what this child did so well as evidence that all children of his age should do a certain amount of paper cutting. The valuable pedagogical suggestion that it contains is that children should be supplied in the home and in the school with a variety of materials and have an opportunity to express themselves with perfect freedom.

If the development of the race and child have any pedagogical significance, this is evidently the ripe time for the beginning of the study of nature. We are not, neither shall we be, free from the need of and interest in the three fundamental human needs, viz., food, clothing, and shelter. The poet and philosopher can not prosper on rhyme and speculation alone. They, as well as the scientist and laborer, must have life before they have their own peculiar lives; they, too, must be fed, clothed and sheltered. We have here a center in which the interests of all humanity converge. The poorest and most ignorant have little more, and the most favored have nothing that can be substituted for them. The need for biologic knowledge was the first and continues to be the primary need of life. To know in some way which things are for us and which against us, which will cure and which will kill, in short to know the life with which and in which we live is our primary need. This is not only true chronologically, but logically and biologically as well. There is no escape from it. If there is any truth in the "recapitulation theory," and if the natural, spontaneous interest of the child is to be a determining factor in the selection of material for the kindergarten and elementary school, it would seem to be a gross error to omit those things which have been the earliest and most persistent elements in the development of the race and in which the child finds its greatest delight.

It would be outside the scope of this paper to discuss the standpoints, sources, and methods in Nature Study, suffice it to say that the most prevailing standpoints are what are known as the (1) Mytho-poetic, (2) Human value relation, (3) Ethical value, (4) Æsthetic value, (5) Intellectual value. None of these is all-comprehensive and, indeed, it may be that all of them are not, but each will serve as an organizing idea for the work. A pedagogical question which arises is, which should come first, second, etc.? The interest of the child must determine this very largely. Perhaps, for young children, better and more varied results could be gotten from the Mytho-poetic standpoint. Perhaps, for the adolescent, the standpoint of Ethical values could be used most effectively. We see here how intricately related are all the problems and phases of pedagogy. To plan a course in Nature Study one not only needs to know nature as it is to-day, but also the cultural stages through which the race has passed and above all he needs to be a student of children. Whoever tries to solve this or any other pedagogical problem from the standpoint of some little phase of work in which he may have particular interest is more apt to go wrong than right. The great text book of nature is open before us. In this, both the race and the child find their most primary and fundamental needs supplied, and their first and most abiding interest awakened. In the kindergarten and elementary school, when practicable, the care and culture of animals and plants should be the first aim; where this is not practicable, association and acquaintance with them should be encouraged. This study should constitute the very core and heart of elementary education and should be secondary to no other phase of work.

This is also the time to use Myth and Narrative History. For the child the world is shrouded in mystery and peopled with strange and unheard of beings. The mysterious appeals strongly to all, but especially to the child whose experience is limited and to whom the world is largely a mystery. Although his curiosity for meaning is intense, the world cannot be interpreted to him scientifically or philosophically. Myth offers a splendid opportunity for introducing him to many of the forces and passions, hopes and fears, victories and defeats that have made his world what it is. It should be taught as the counterpart of Nature study, the one introducing the child to life as it is found in plants and animals and the other introducing him to human life and spirit. Following close upon Myth or carried along with it, should come Narrative History—not the history grind but the historical story. Children have great delight in change, in movement, in events. This is especially true where the agents are human or where they are conceived as possessing or being ruled by spirit akin to human spirit. The child is not interested in the intricately complex principles and processes of modern society, but its interest in the simple and more tangible beginnings is absorbing. Any phase of history that can be subjected to the form of the simple narrative story is most excellent pabulum for the child at this time.

There remain to be discussed the subjects of Reading, Writing, and Arithmetic (the three R's) for children before their seventh or eighth year. To make more firm the ground on which deductions in regard to these subjects are to be based, let us notice some additional things that are true of the child and his development during this stage. In his address on Movement and Psychic Processes, Mosso (26) says: "In man the brain develops later than in all other animals, because his muscles also develop later. The striped muscles are more incomplete at birth in man than in any other animal. For this fact that the human brain develops so slowly, I am able to discover no other reason than this, that at birth the organs which effect movement over which the brain exercises its authority, are not yet complete. Modern views show a tendency to confirm what the great philosophers of Greece already recognized, viz., that children ought to begin to read and write only with the tenth year; that it is injurious for the development of the brain to be fettered to the school-desk when only five or six years old. Attention produces not only the same chemical effects and the same fatigue as muscular exertion does, but we feel also, when we are attentive to any thing, the characteristic muscular strain on the occiput, the forehead, and other parts of the body. The more mobile the extremities of an animal are, the more intelligent it is.

"The mutual relation of intelligence and movement is one of the most constant factors in nature, the movements always change where intelligence changes. Microcephalic individuals have an awkward gait, and an inconsiderable dexterity in the movement of the hands. This change is still more striking in the case of idiots. When the brain has been fatigued by exclusively intellectual activity, the sensitiveness of the hand and direct irritability of the muscles are also decreased. The influence of the hand upon the development of a language is evident from the fact that an aphasic patient is made to write in order that he may gradually regain the power of speech. The relation between muscular movements and conscious processes is so intimate that when the arms and hands of a hypnotized person are brought into certain positions, and certain muscles by external contact made to contract, certain emotions are induced corresponding to those muscular contractions."

But, as has already been noted, Ross, Bryan and Burk have shown that before seven or eight years of age, the child is to a high degree inaffective as a motor being. The work of Lukens and Barnes on Drawing as well as common observation by every one, re-enforces the thought. If there is then this close parallelism between movement on the one hand and psychic processes on the other, as is claimed by Mosso, it must follow that inasmuch as movements are spontaneous, unco-ordinated, and but slightly under the voluntary control of the child, so will its thoughts likewise be spontaneous, flitting and illogical; and this is exactly what we find in every-day observation. Dr. Vulpius has studied the fibers which horizontally traverse the surface of the hemispheres, which he calls the tangential fibers. These appear on the outer layer of the cortex in the fifth month of life; in the seventh month the tangential fibers can be found in the deep layers; while in the layer between, the cross fibers only appear after a year. In the child of eight, and even perhaps of seven years, the fibers of the cortex and medullary substances are complete in number and caliber, and have taken the same arrangement as in the adult. It is during the development of the brain and nervous system before birth and during these first years of growth, that malnutrition and perverted action occur, which result in defective mental power.'' The point in this that needs to be emphasized here is the close relation between nervous nutrition and mental power. Neurologists and students of children's diseases all agree that up to seven or eight years of age is the period that brings out the effects of bad heredity due to the rapid rate of growth and instability of the organism. If, as Hurd says, in the process of education, energy designed to further the growth of the brain is dissipated in functional activity, hereditary tendencies to disease become thereby developed, or the development of the brain is limited and defects become evident which under more favorable circumstances would not have existed.

To summarize the foregoing, we have (1) a close relation between movement and intelligence. (2) The child's movements are unco-ordinated and spontaneous. (3) Therefore, the child's mental life at this time is apt to be spontaneous, flitting, and illogical. (4) The brain is developing primarily in growth and not in function. (5) We should, therefore, expect a very simple kind of mental life. (6) The necessity for brain nutrition and not brain functioning to bridge over the period when hereditary tendencies to disease are most apt to be developed. If these things are true a question for pedagogy to answer is, are reading, arithmetic and writing as daily assigned tasks, conducive to the best development and highest welfare of the child? Is the amount of information and so-called discipline derived from their study by children under eight years of age worth the cost? A comparison of the outlay with the income, compels the conclusion that they are not worth the cost. My reason for so answering is that work in these subjects flies directly into the face of the foregoing facts of child life and development during this stage. First let us notice reading in the light of the summarized statement of facts.

Perhaps no one who reads this will remember his own peculiar psychology when he learned to read his mother tongue, but most will remember how it was in learning a foreign language. Students of the French and German language find at first if they are very careful about their pronunciation they are apt to go over a page without extracting the thought, on the other hand they find that if they are anxious about the thought, their pronunciation is bad. Young men and women find it very difficult to get both faultless form and meaning until they have spent many years upon the language. And, yet, we require of the child with his simple undeveloped unco-ordinated, physical and mental life to perform an even more difficult task.

Is there any one who does not remember what a fearfully difficult thing it was even to keep the place? But this is only one element in the child's difficulty; he must hold his book up, hold it open, keep the place, and by close attention and delicate adjustment of the eyes, he must decipher the characters in themselves and keep them related to each other and then we expect him to get the meaning and read with the spirit and understanding. The performance of such a task is not only injurious but in most cases impossible, and its requirement positively cruel. Such work should not be a fixed daily task of the child until there is a fair degree of muscular co-ordination and control, and mental strength commensurate to such physical development, and until the period for the cropping out of weak hereditary tendencies due to instability of organization and rapid growth is passed over, which would be at about the age of nine or ten. For essentially the same reasons work in arithmetic and penmanship should be taken up, if at all, only incidentally during this early stage.

Aside from the purely concrete number work, Arithmetic is sufficiently abstract and general to demand at least a fair degree of brain functioning and the ability to direct attention and to carry on in a simple way at least the processes of abstraction, association, and generalization. There is nothing in the physiology or psychology of development that indicates that the average child of seven or eight is capable of these things. By constant appeals to the child, together with scolding and threatening, a few arithmetical facts may be literally hammered into its head, but no one would ever guess that he could do anything worth while with these facts outside of the school room; on the contrary, every one who has given the matter even passing attention knows that he cannot. If the child should give all the time and energy that are worse than wasted on Arithmetic, to sensible work in Nature Study, Myth, and Narrative History, for which he has both an interest and ability, the world would be revealed to him in innumerable ways, learning would not be a drudgery and a bore, time would be found for the introduction of many kinds of work that have a real significance and value for him, and even more effective arithmetical knowledge and ability would be gained incidentally in connection with the subjects of vital interest and importance than are gained by the humdrum, formal study of the dry-as-dust arithmetic.

Reading and arithmetic should not be taught as formal subjects until the close of the transitional period which closes out the stage of childhood at about the age of nine or ten. The old conservatism which keeps us doing things simply because we have been doing them must be broken away from whenever there is ground for so doing, and especially when it is plain that there is a better thing to do. When reading and arithmetic constituted almost the entire curriculum, child life and its development were not the criterion. Social rather than physiological and psychological facts were the determining factors. Professor Dewey (13) has well said that "The primary school grew practically out of the popular movement of the sixteenth century when along with the invention of printing and the growth of commerce it became a business necessity to know how to read, write and figure. The aim was distinctly a practical one; it was utility; getting command of these tools, the symbols of learning, not for the sake of learning, but because it gave access to careers in life otherwise closed." Neither should the social aspect of education to-day be ignored in the planning of school work, but it should not be emphasized to the hurt of the child. As was stated in the introduction, any attempt at curriculum making or educational procedure which does not take into account the laws and stages of development of the one to be taught, is apt to go wide of the mark and result in positive injury.

Conduct. In deducing some of the more general principles which underlie the conduct and moral training of the child up to seven years of age, we must here, as in its play and work, make our determinations from the standpoint of the child itself and not from the standpoint of the adult. Two points must be borne in mind. (1) Many things which would be grossly immoral for the adult have no moral significance whatever for the child. (2) The child's standard of morality, so far as he can be said to have a standard, does not come to him so much by intuition as by precept, and not so much by precept as by unconscious suggestion and imitation. The first point will be helpful in determining the content of morality for the child, and the second will serve as a guide in determining the method in moral training. Nothing could be more deadening to the development of the child than an attempt to make it conform in every way to the moral standard of the adult. Because the child appropriates at this age that which does not belong to it, it is not therefore a thief as its father would be under the same conditions. Because the child in the vividness of its imagination does not adhere strictly to the literal truth it is not therefore a liar. Because the child connives in every conceivable way to attain a desirable end, it is not therefore a trickster; and because the naked child, even at seven or eight, manifests no sense of shame, it is not therefore disgracefully immoral. From the standpoint of the adult these things would all be gross breaches of morality, while from the standpoint of the child they have but little or no moral significance. On the other hand there will come a time in the life of the child when these very things will have great moral significance, and the pedagogical question which must be met is, what can be done for the child at this time which will result in a sense of right and wrong and a disposition to do the one and avoid the other, but which will not result in prudishness or a precocious and morbid sense of moral delinquency? Prudishness and moral morbidness, above all things else, must be avoided during these years. Better no sense of morality at all, than that the child of six or seven should either hold himself up as a bright and shining example of right conduct, or that he should magnify his childish mistakes into cardinal and unpardonable sins. Such moral attitudes are by far more hopeless, even, than almost any overt childish misdemeanor. It is not good for the child to be acutely conscious either of his goodness or his badness. His mind for most part should be, and under normal conditions will be, occupied with something other than self. It is in this connection that direct, positive, moral training at this time not only fails to accomplish desirable ends, but does positive harm; the child and his behavior are apt to be made the topic of discussion. For this reason, in all attempts to teach morals, an indirect method—the reading of a story, the relating of an incident, etc.,—is superior in every way to the more direct treatment, which should be held in reserve for special cases. We often teach the child to discern the right from the wrong, and admonish him to cleave to the one and forsake the other, only to find that as a result of our teaching, or in spite of it, the second state of that child is worse than the first. As a rule, the discriminations that he is capable of making are not effective in determining the course that he will pursue. Fine discriminations and admonitions are apt to be valuable in proportion to their scarcity. Nowhere in the development of the child do suggestion and imitation play so lasting and important a role as in the development of morals and conduct. As nothing helps the child so much in the acquisition and use of good language forms as saturation in good language forms, oral and written, so nothing will instill within him the habit of using pure rather than vulgar language so much as association with those who always use pure language. No amount of moralizing on the sinfulness of lying will help the child so much as living with people who always speak the truth; and nothing will more readily and effectively develop in the child a sense of personal and property rights than association with those who are careful to observe the rights of their fellows, and who do not appropriate to their own use that which does not belong to them. The first great concern of parents and teachers, who are interested in the morals of their children, should be their own behavior.

The moral ideal for the stage of childhood is innocence of right and wrong, morally considered. Every child knows that there are some things that may be done and some that may not. This knowledge should come to him more as a matter of course. He soon learns to keep his hands out of the fire because he does n't like the result of putting them into it; and so he must early learn to desist from many things for the same simple reason that he does n't like the consequence; but he does not, neither can he look upon these things in themselves as right or wrong. I have known children to repeat the oaths of their elders with as little sense of guilt as if they were repeating the catechism, and in so doing they were not therefore immoral. The danger, however, is that having the language at their command, it will be but a short step to supply the content, which means profanity. Something should be done to prevent such results. Prohibition of the use of such language, with little or no emphasis upon the naughtiness of it, is the most rational and effective remedy. And so it is with the child's conduct in general. The experience of the parent and teacher must count for something, else what is the significance of parenthood or control in school? There will come a time when the child should be thrown upon his own responsibility—left more or less free to do as he desires, without let or hindrance, but not so now. Indeed, at the beginning of life, so far are we removed from the possibilities of such an ideal that implicit obedience should be insisted upon. Some one has wisely said: "If the child does not obey when first commanded he should be punished; but if the teacher even succeeds in securing obedience after he has commanded many times, he, and not the child, should be punished."

Teachers must know how demoralizing it is to keep nagging at children. They must also know that for many reasons there are some requests whose reasonableness cannot be explained to the child. In such cases implicit unquestioned obedience should be expected. The child with a healthy mind does not contemplate the wickedness of one possible line of action and the goodness of another possible line, and upon the basis of this discrimination determine his act. If he be a normal child, he does desist from doing certain things, because he has learned that these are things that must not be done, and he falls into the habit of letting them alone. On the other hand, if he be a normal child, he does certain things over and over again, until his habit of action begins to take form; and, so, the child should pass from his childhood into the early years of youth with the alphabets of moral habits pretty firmly fixed, but in no sense a contemplater of deeds.

SUMMARY.

To summarize the stage of childhood briefly:

(1) There is here, as elsewhere, a close relation between physical movement and mental efficiency.

(2) The child's physical movements are spontaneous, uncoordinated, and but slightly under voluntary control.

(3) Its mental movements are likewise spontaneous, flitting and illogical.

(4) The end of work is a definite product—physical or mental.

(5) This is the time of rapid nervous growth and great nervous instability.

(6) The brain approximates its full weight at seven or eight, at which time development turns more to function than to size.

(7) The child's mental life consists chiefly of percepts, reproduced images, and crude products of the imagination.

(8) This is the time when suggestion and imitation play their most important role.

(9) In general, for the child of this age, right is what he may do; wrong is what he may not do. He has but little notion of right and wrong in themselves.

Based upon the foregoing and their corollaries, the following deductions are made:

(1) The chief business of the child up to seven or eight should be growth; hence, nutrition in its widest sense is its greatest need. (2, 3, 5, above.)

(2) The child is incapable of producing effectively, and is apt to be permanently injured by trying to do so (2, 3, 5, above), hence, he finds his chief occupation in play rather than in work.

(3) The child should be required to do only those things for which he has a fair degree of efficiency (2, 4, 5, above), and for most part those things which appeal to him.

(4) The child is helped more through suggestion and imitation than by formal instruction. (7, 8, above.)

(5) Through suggestion and imitation his social and natural environment have great influence upon him. (8, above.)

(6) The aim of training at this time should be the production of the healthiest child possible, and not information. (1, 2, 3, 5, 6 above.)

(7) Some things besides play which appeal to the child at this time and which give him mental vigor, and at the same time do not interfere with his development, are Nature Study, Myth, Narrative History, Paper-cutting, Free-hand Drawing, and Singing.

(8) Arithmetic and reading require muscular and mental ability and control that the child has not yet attained, and should not be a part of the regular school work. (2, 3, 5, 6, 7, above.)

(9) Nothing has so great moral effect upon the child as the things he sees and hears. (8, above.)

(10) Unquestioned obedience to rational, intelligent authority

should be the principle in the management of young children, and freedom from this principle will increase with the development of the child.

In the negative discussion of reading and arithmetic for the stage of childhood, I have already anticipated some things which from the positive standpoint belong to the following stage. But before passing to this stage the transitional period which comes between these stages must be treated.

IV.

Transition from Childhood to Youth.

As has already been shown, the stages of infancy and childhood are ushered in by short transitional periods, which are both retrospective and prophetic. So, in passing from the stage of childhood to that of youth, at about the age of eight, there is a marked transition which carries into it and ofttimes through it, many of the characteristics of the preceding stage, and at the same time develops new features which are peculiar to the stage that follows. As in the other transitional periods, so here there can be drawn no hard and fast lines, but in general the time is between seven or eight years of age at the beginning and nine or ten at the close. Old things are passing away and new ones appearing.

At about seven or eight years of age the brain has approximated its full weight, and is changing in its development from increase in size to increase of function. Along with this there is also a change in the rate of bodily growth; so that the annual increase will be greater at the beginning of this stage than it has been through the stage of childhood.

The child is losing its first teeth and the permanent ones are coming. This more objective and superficial change seen in the case of the teeth has many physical and mental counterparts; the child is not quite at its best either physically or mentally.

Doubtless many of the disturbances of this time are due to bad nutrition which finds its cause in improper mastication of the food, the child having sometimes as many as three or four teeth out at a time.

This same thing is seen in many of the domestic animals, notably the horse which gets his second teeth at the age of four. Dealers in horses for the market will not buy under five years of age. Their stock remark is that a horse at four is no account. While this is not literally true, any one who has handled young horses knows that a four-year-old does not have either the endurance or trustworthiness of a three-year-old. Reggner (4) observed that young monkeys often sickened and died of fever when shedding their milk teeth, and the same process is certainly not free from risk in the human subject. Nervous children often become emaciated during its progress, or suffer much from neuralgia or cough; and from having been hardy and robust, they become pale and delicate. Apparently in connection with it also complaints are sometimes made of headache, tenderness of the eyes, and lassitude.

At this period is encountered also that curious and sometimes puzzling perversion of the moral nature, known as malingering. From egotism and insatiable craving for notice and sympathy, from a desire to escape work, from jealousy, or from some more complex motive, the boy or girl simulates disease, and may do so with considerable ingenuity and success, or exaggerates some trifling ailment.

The disorder is generally poverty of the blood and nervousness, which not rarely are connected with constitutional changes associated with the second dentition.

There is a change in the vascular system at this time. Krohn has found that the child of eight fatigues much more easily than the one of six or seven or the one nine years of age. There is apt to be dilation of the heart and cardiac incompetence, such as shortness of breath and readiness of fatigue. The reason for the dilated heart at this time is the sudden increase in weight of the child without corresponding increase in size of heart muscle. The dilation or tendency to dilation and fatigue curves, represent the fact that the child must conserve its strength until its heart grows to its work. (9, p. 114.)

Dr. Christopher (10, pp. 330–331) says,—"We must recognize that the period from seven to nine years of age, quite irrespective of the other conditions of the life of the child, is one in which fatigue occurs very readily and is one in which damage to the heart is likely to be produced. This period in child life is one to which special attention should be called because of the extremely insidious character of its approach. It is not only in physical fatigue that it manifests itself, but in mental fatigue and in the exhibition of many nervous symptoms otherwise utterly unaccountable.

One of the commonest manifestations is the appearance of general laziness on the part of the child, and it is extremely common to conclude that the child needs more exercise. As a matter of course it is perfectly evident that, of all things, the child does not need more exercise at this period, but in every way its force should be conserved and its labors reduced to the smallest possible degree consistent with the maintenance of health. The duration of this period lasts occasionally a few months, although in a number of instances I have known it to last two years and even longer, during which time the child's failure to develop sufficient progress at school, and its manifestations of unpleasant nervous symptoms have been the cause of great anxiety on the part of parents. It is clear that the school work during this period of life should be diminished to a point below that which has been done the previous year and which may be undertaken safely the next year."

The studies of Jastrow (21) indicate that at this time there is a transition, change or stage in the development of the special senses notably the sense of sight. The results of his investigations and observations show that children who have lost their sight before about seven years of age (the time coincides to the time for the approximate weight of the brain) do not have visual images, and, as a rule, those who lose their sight after this time do have. This, perhaps, does not point so much to a change in the development of the organ as it does to a central change. However this may be, it is significant as marking a time of transition in the course of development, and is fraught with great pedagogical value not only for those who teach all classes of blind, but also for those who teach normally developed people.

One of the most striking changes that occur at this time is to be seen in the entirely different nature of the somatic diseases preceding and following this period. As has been shown, during the stage of infancy from two to seven, is the time for infectious diseases, and in his treatise on The Diseases of Infancy and Childhood, Holt shows that after this time there is a transition from the infectious diseases of childhood to the diseases which are more often found in adults than in children. The change in nervous diseases at seven or eight indicates even more clearly than does the change in somatic diseases that this is a time of transition. Before this time which Clouston (11) designates as the period of most rapid brain growth, special sense education, motor co-ordinations, and speech, the prevailing nervous diseases are convulsions, squint, stammering, backwardness of speech, night terrors, infantile paralysis, tubercular meningitis, hydrocephalus and rickets. "Every one of these," he says, "can be connected with the immense brain growth of the period, with the development of certain essential brain functions at this time, such as speech equilibration, and the other essential muscular co-ordinations, with the intense trophic activity, and with the rapid metabolism of every tissue, with education of function of special sense organs and their brain centers."

The character of the nervous diseases which follow this short transitional period in most cases differs very greatly from that of the diseases preceding it. We have now, says Clouston (11), the period when muscular motion becomes co-ordinated fully with emotion, as seen specially in facial expression; and the nervous diseases which characterize the years from eight or nine to thirteen or fourteen are chorea, some cases of epilepsy and somnambulism, megrim, asthma, and some eye defects.

In this transitional period, at about eight years of age, there are as many striking indications of physical disturbance and readjustment as are found in the pubescent period with which all are acquainted, and about which so much has been written and spoken. I think there can be no doubt that if the period at eight carried with it any objective sign of the birth of a function so deep-seated and universal as is the sex function, it would not have been so long in receiving the attention due it. For in other ways the changes which occur at about eight are even more striking than those that occur at about thirteen.

As was said in the introduction of this topic, the life at this time is both retrospective and prophetic. We have both the traces of the stage preceding it and suggestions of the stage following. Part of the child's teeth are temporary and part of them are permanent; the child's brain, although it has approximated its growth in size, and is turning toward development of function, nevertheless continues to grow at a slow rate, and functions often inaccurately and with difficulty. The vascular system is as it was, while the muscular system has taken a sudden leap ahead, and the disproportion in the development of these two systems at this time results in cardiac incompetence and fatigue.

The somatic and nervous diseases are about evenly divided between those characteristic of the stage preceding and the one following.

There seems to be no abrupt change in the development of the senses at this time, and yet the period is significant, inasmuch as those who lose their sense of sight before this time are apt not to have visual images and those who lose their sense of hearing before this time are not apt to have auditory images.

This then is a time of readjustment in the vascular, muscular and nervous systems, and of great disturbance in the functions of circulation, digestion and nutrition. Coming at about the age of eight, when the child is apt to be in his third or fourth year of school, these facts are fraught with great pedagogical significance. It seems evident that the child is not capable of the same amount of physical and mental activity and endurance as he was at six or seven or as he will be at nine or ten, and this fact in itself would demand on the one hand a decrease in the amount of work required and on the other hand the provision of ample opportunities for pleasant recreation and amusement and quiet rest.

Dr. Jackson (4) says, referring to the disorders incidental to the second dentition, "The remedies which I have found most useful are as follows:—First, a relief from study or from regular tasks, yet using books so far as they afford agreeable occupation and amusement. Second, exercise in the open air, preferring the mode most agreeable to the patient and in more grave cases the removal from the town to the country."

V.

YOUTH.

Although no two records on the growth of children coincide throughout, there seems to be in a general way agreement that at about eight or nine years of age there is a sudden increase followed by a slight decrease in annual increment until the time just preceding puberty. So far as is known there is nothing peculiar in the development of the nervous system at this time. There seems to be a steady development of its functioning power and a very slight increase in the weight of the brain. These years of slow growth from about nine to twelve or thirteen years mark a third definite stage in the development of the child. Both the physical and psychical life are unique and demand a unique pedagogy. The child is not simply his former self grown larger but he is in many ways an altogether different being. The transitional period from seven to nine has served to transform him not only nominally but actually from the stage of childhood to that of youth.

The chances for life are better now than they have been heretofore, the girls being least susceptible to disease at 11 (3.23 per 1000) and the boys at 12. (3.42 per 1000.) (17.) The somatic diseases to which the child is liable, while not peculiar to this stage, are almost entirely different from those of the stage preceding this; while the nervous diseases to which he is most liable are to a high degree peculiar to this stage. The heart muscle has increased in size proportionately to the size of the body and so fatigue is less easily induced than at the age of eight. "Sensation, special and common, and its organs have been developed; muscular co-ordination has progressed far; and many of the mental faculties, such as memory, fancy and emotion, have all acquired some strength, but muscular action has not been fully co-ordinated with feeling, and this is the period of life when this co-ordination takes place." (11.) This is the period of endurance and of co-ordination mental and physical, and mental with physical; the time for the storing up of reserve power and the establishment of automatisms—the essential forerunners of the reproductive function. It is the intermediate stage of life between the stages of greatest brain growth and of highest functional advance; between the pure gathering in of egoism and the appearance of the higher altruism. Above all things else this is the "laying up," the "salting down" stage of child life. . . . As before, let us consider this stage from the three-fold standpoint of play, work and conduct.

Play. In regard to the child's play at this time the principles recognized in the earlier stage should not be lost sight of here. It should be unhampered, spontaneous and careless of ends. But there are other elements entering now that were not present before. This is the time when the transition is made from the purely individual games and plays to the full fledged co-operative games. Every nine-year-old boy has his nine and eleven or belongs to the teams of some other boy. From the immediate artistic standpoint all such co-operative play is a failure, but its mental and physical significance to those who participate can hardly be gainsaid. At first the captain of a team will hardly be able to hold his men together long enough for a single game; a bruised finger, a bad start, an imaginary slight sustained by a prominent member of a team, and a multitude of equally trifling matters play havoc with the captain's organizing genius.

These things are not so true of the twelve-year-old team. Three years have served to work a transformation. Now teams are organized that remain intact all season—and so almost every town has its "North Enders," "South Enders," "West Siders" and "East Siders." Whereas the nine-year-olds hardly knew the "outs from the "ins," the twelve-year-olds know the game as well as the most inveterate "rooter." Furthermore they have attained the muscular strength and co-ordination to execute it. Hand in hand with this development of muscular strength and control have gone mental strength and control. So that the team hangs together after a half dozen crushing defeats. They do not disband because the pitcher has an off day or because the center rush fumbles. They have learned that to have one's own way absolutely in play means to play alone, and that team work means self-control in the highest sense. Aside from health, which should be the chief consideration, the great gains to be derived from play at this time are to be seen in the increased mental and physical control developed in co-operative games and plays. Along with this control and subjection of one's whims and caprices for the sake of the group there must be found the same spontaneity and freedom as characterized the stage up to seven. The chief difference lay in this, that whereas in the earlier stage the plea was made for the absolute freedom and spontaneity of the individual, here we must insist upon the same degree of freedom and spontaneity on the part of the group. There the individual quit playing with its doll and began playing with its toes at will. Here the group quits playing ball and begins playing war at will. There the child exercised the initiative in every particular. Here the group exercises this prerogative. There must, in the latter as in the former case, be absolute freedom from external control. Better that a team should disband a dozen times a day than that it should be organized by the captain's father and sustained through paternal compulsion. On the other hand, one of the things that every child must learn sooner or later is that if he is to live in society there are some things he may do and many things he may not do. One of the hardest lessons that a boy has to learn who moves from the country into the city is that he cannot throw stones in every direction. It is not easy for him to reconcile himself to the proposition that all his throwing must be straight up. But that is the price one must pay for social life. There is no place where this lesson can be taught so naturally and brought home to the child so forcibly and in a way that it will be accepted so readily as in its own co-operative games and plays. Thus unconsciously to the child and entirely incidentally has come to him one of the most essential and fundamental lessons of social life.

Conduct. In the following discussion of work for this stage, and of conduct for the previous stage, most things that bear upon conduct at this time are given. All of the principles suggested for the earlier stage should be observed here. But it must not be forgotten that the child's notion of right and wrong has developed *pari passu* with his physical and mental development. He should, therefore, be held responsible for his conduct in a way that heretofore would have been unjust. Insight and rational sympathy on the part of the teacher and parent are of the greatest importance. Judicious but close discipline should be exercised. While the fundamentals for work as suggested below are being drilled into the child at this time, it is just as necessary that the fundamentals in conduct should not be slighted. No task should be set that is too difficult for the child to perform, and no performance should be accepted that is not well done. Irremediable injury will come to the child who is allowed to roughly approximate a standard in work and conduct. Fairness should always characterize any requirement in conduct, and the child should be expected to fulfill this requirement promptly, fully and unequivocally. These are the years for discipline in conduct as well as in work.

Work. The stage from nine to thirteen differs from the one up to seven in that the earlier was pre-eminently the play stage while the later should be pre-eminently a work stage. It was found that before seven the child is not apt to have developed mental and physical control sufficient to enable him to produce effectively and that he is apt to be injured by trying to do so. After the transitional period, at about eight, the average child is found to possess sufficient strength and control in both these lines to produce effectively in various ways without endangering his health or development. It must never be lost sight of that an injudicious amount of work is to be avoided at all times.

This, then, is the time when the child should be initiated into hard work. It is a time, also, when his tissues, muscular and neural, are plastic and when he is largely exempt from disease. It is the time for drill, for practice, for discipline and even for drudgery. This is in no way contradictory to the doctrine of spontaneity advocated in the preceding period. The conditions of life that I have just enumerated show that the child does not now run the risk of arrested development that he has heretofore and there is one very important chapter of psychology that is too little considered in the discussions of the spontaneity and natural interest of the child. This is the dependence of interest upon attention. The emphasis is almost always placed upon the obverse proposition that children attend to whatever they have an interest in, but it is just as true that they are apt to become interested in whatever they attend to. Owing to the conditions of development, I should say for the stage up to seven, for most part let them attend to those things which attract them without assistance and for this stage let them attend to those things which serve as the alphabets of formal school work even though at times their interest in some lines must be induced by attention to them.

Many lines of work which the child was capable of pursuing only incidentally in the previous stage should now be taken up in earnest, while the things he has been doing he should in a degree continue to do.

Nature Study should not be supplanted by arithmetic, and the story will still have its place in the curriculum, but there will be readjustment of work so that the course will be strengthened by the addition of subjects. Reading should now be made one of the daily assigned tasks. The average child by this time possesses the mental and physical strength and control which will enable it to use the instruments of reading as a source of enjoyment and information without endangering its health and robbing it of time that could be much more profitably used in other ways. The child of nine or ten will not consume all its energy in holding the book open, keeping the place, and interpreting the thought. The end to be attained should be facility rather than ability to pronounce polysyllables. To this end there should be a well selected list of books treating of all subjects of human and especially of childish interest accessible to the child, and he should have perfect freedom in the selection of his reading material. A great amount of oral reading should be encouraged. Facility to catch the thought and to express it intelligently must be sought. The aim should not be to develop critics but to master the subject as a tool; to become proficient in the use of it as a joiner is in the use of his chisel. It need hardly be said that the child's opportunity for such drill is not limited to his reading and story books, but that every book he uses, regardless of subject matter, serves equally as well. If the time given to reading before the child is seven years old were given to real things in which he has a lively interest, as was suggested in the discussion of work for that stage, it would bring such a fund of information and interest to its reading work at nine years of age that the problem of method in teaching reading would practically solve itself. It has been demonstrated over and over again that the way for an adult to get a working mastery of a language is to become absorbingly interested in the subject written in that language. And so it is with the child. If he can arrive at this stage with a first-hand knowledge of and interest in rivers and hills, flowers and trees, birds and bugs, animals and people of all sorts, reading will be a key whose use he will not be long in learning. Arithmetic should also cease to be only an incidental study and should become one of the regular studies of the programme. The child now possesses a fair degree of brain functioning power, and the ability to direct its attention and to carry on, in a simple way at least, the processes of abstraction, association and generalization. It also has physical development sufficient to use the materials of arithmetic to some purpose and without injury to itself. The aim at this time in arithmetic should be a mastery of the fundamentals; the establishment of the alphabets of arithmetic. For two reasons this should be done. There will never be a time when the child can do this kind of work better than he can now; and advance in the subject is absolutely hopeless without it. The child must learn to read and write numbers, whole numbers, fractions, decimals and denominate numbers. He must learn the addition and multiplication table until, shuffle it however you will, it will be as familiar to him as his own name. He must become thoroughly at home in the tables of denominate numbers. No effort should be made to put the child through the book or to make a mathematician of him. He should not be held so much for his method as for his work. He should not be held for the logic of his work but for the performance of it. He is not necessarily ignorant of his work because he cannot explain it. The aim in arithmetic at this stage should be *drill* upon the fundamentals until the child uses them with as much ease as he feeds himself. The foreign languages should be taken up at this time. Indeed, if the child is so fortunately situated as to hear these languages, or if skillful teachers can be secured, they may be taken up much earlier. (See p. 370.) But under no conditions should they be allowed to be deferred to a later time than this. Observation and testimony both show that seldom is a person who begins the study of a foreign language at a later stage entirely free from the accent peculiar to his own language and in every way as proficient as a native born. This is the time when children manufacture language; when they speak the so-called "pig latin;" when they distort their words and sentences; when they communicate in abbreviations; when they use secret language; when they begin to talk by gestures and use the deaf and dumb alphabet. It is the ripe time for the grafting on of new modes of expression. Furthermore, the wisest and most successful teachers of foreign languages advocate its study at this time, and some of them even earlier. As in the use of the reading and arithmetic book, so here the child is able to use the materials necessary for such study. The thing to be aimed at is facility. The conversational method should be insisted upon. Whoever cannot teach by this method should be considered unfit for the modern languages as one who does not know the multiplication table without the book is unfit to teach arithmetic. Correct forms should be insisted upon from the start. This end will not be attained so much through a grind upon technical grammar as by reading and hearing good forms and exercise in the use of them.

The ideal for the foreign languages at this time will be much as the ideal for the mother tongue was in the earlier stage and indeed as it is for most part in this stage. *Saturation in good forms both oral and written with perfect freedom of expression.*

The work in Nature Study will serve as the most natural introduction to the more formal study of geography. The child's interest in his natural environment will be extended to an interest in nature in general. Through his knowledge of and interest in the plants and animals of his own region he can easily be led into a study of the fauna and flora of different countries, and this will in its turn serve as an excellent introduction to the study of biology a little later. In the same way an interest in the mineral world will bring him naturally to the study of geology. The child knows that many things that he consumes in the way of food and clothing are not produced at home and he also knows from his previous work in Nature Study that these things have their origin in plants and animals. Here is an additional incentive to study the plants and animals of different regions but it serves its highest end as an introduction to the study of the two great geographical topics of commerce and manufacture. No more dreary task was ever assigned a child than the one of committing to memory outright all the agricultural and manufactured products of the different States in Asia or the imports and exports of Australia. And no more valuable or absorbingly interesting piece of work can be undertaken than the tracing out of the processes that resulted in the shoes or the hat that he wears or the salt and pepper that he eats. Instead of getting a few isolated facts which are dismissed after the recitation for others just as valueless, the child would thus get things in their relations and the phases of original production, transportation and manufacture would signify something to him. Without any attempt at philosophizing, a thing to be studiously avoided at this time, a question which always arises in the mind of the child is,—"Why don't they raise pepper and cotton in New England?" "Why is the meat that I eat carried from the Mississippi Valley?" "How is it that the people in the plains and their neighbors on the mountain side produce such widely different things?" "Why is Vancouver so much warmer than Labrador?" It need hardly be said that such questions show that the time is ripe for the study of climatic conditions—the significance of altitude, latitude, ocean currents, relief, contour, movements of the earth, the change of seasons, and all the geographical conditions which make the products of one region differ so widely from those of another. The study of the relief of a country, its climate, etc., paves the way to a study of the geographical basis for the history work. Children at this age can be led to see and have great interest in seeing why, for example, Illinois does not extend a little farther west, Indiana a little farther south and Massachusetts a little farther east; that ancient Greece was not divided into more than twenty States through mere resolutions, and why modern Switzerland is divided up into twenty-six cantons.

It must be admitted that these suggestions do not at all times run parallel to the logic of the subject, but it must also be admitted that they do run parallel to good pedagogy and we care more for pedagogy than we do for a smooth running piece of logical machinery. The chief reason that geography has been a bore to students and a burden to teachers and a grief to pedagogues is, that we have been trying to organize it and present it logically, beginning with mathemathical, in which the child can possibly have no interest, and going from this through physical to political. If the wits of the pedagogic and scientific world were summoned to devise a more unpromising and fruitless scheme for geography work than the one of following out the logic of the subject, their work would surely result in unequivocal failure.

In the same way the history stories and the myth of the earlier stage bring the child naturally to the more careful and detailed study of history. The work at this time should be full of human interest. The time has not yet come for the more abstract study of treaties, constitutions and government documents. In the study of American history, the beginnings of our history appeal very strongly to children of this age. Well written stories of the voyages of Columbus; of the expeditions of Drake and De Soto; of the work of La Salle and Marquette; of the landing of the Pilgrims; of the founding of Jamestown and St. Augustine; the winning of the West; the stories of David Crockett, Daniel Boone, and George Rogers Clark have a very great fascination for the child at this age and will be retained with remarkable tenacity. This is the "blood and thunder" age of the child. He will follow out in detail the manœuvers of an army, the rough plan of a campaign, the results of battles with more delight and often with more accuracy than he will at a later stage. One reason why so much of the time given to wars by older students instead of to interpretation and historical documents on the ground that there is no time for the latter is, that the former were not taught when they should have been taught. Any normal child who has had rational training up to the age of ten will read the battles of the American Revolution from Lexington and Concord to Yorktown with approximately as much understanding and infinitely more pleasure and enthusiasm than he will at twenty. Only let the history be authentic and written decently, and do not piecemeal it but let it be read, a whole campaign or a whole war at a time. No wonder a child loses interest and enthusiasm when the lesson closes in the middle of a retreat and the child is punished for reading beyond the prescribed limits of the assignment.

Biography should constitute a large part of the history course at this time. The strong interest in human life and activity so characteristic of the earlier stage has not waned. A majority of our children come from the public schools after three or four years spent in the study of some text-book history without any very definite idea of any of it. If we would but take advantage of their normal interests and introduce them to the lives of the men and women who have made history, the results obtained would be more in proportion to the time and energy spent. It would be unwise perhaps to advocate biography exclusively for this stage but I have no doubt that if the average ten-year-old child could have access to the biographies of twenty of the most influential citizens of our country, representative of different times and movements, his real knowledge of our history would be as far in excess of what it usually is as a mountain exceeds a mole hill. In the life of Washington alone he would be introduced to colonial government, the French and Indian war, attempts at union, the colonial and continental congress, the various grievances of the colonies, the declaration of independence, government under the articles of confederation, the revolutionary war, the adoption of the constitution, the birth of the government, the division of the people into parties, etc., etc. The aim must be to present the work in a connected form. It will be time enough to cross section it and bring together everything that happened everywhere in a given year after the children have the longitudinal lines laid. We must have the historical warp before we try to put in the historical woof.

Manual work adapted to the development of the child should constitute a regular part of the programme during this stage. Just what this work should be, external circumstances and the interest and ability of the child must determine, but in most cases drawing, carving and similar exercises requiring not too fine an adjustment of the muscles are desirable. And this is above all things the time for practice and drill in those lines of muscular activity that are to become habitual. The child who is to become an expert pianist, or violinist for example, should devote these years to laborious drill upon these instruments. Work in voice culture should be begun at this time, although judicious care needs to be exercised later when the voice is "changing" to prevent permanent injury. The one who is to have complete mastery of his body, of the physical movements, must not neglect the work in physical culture. There is no time in one's life when it is so true that "as you live now will determine how you will always live," as this time.

I have in the pedagogical discussions studiously avoided dogmatism. It would argue a lack of comprehension of the entire subject to say that at a given time such and such parts of such and such subjects and nothing else should be given. I have merely tried to show that many things the schools are trying to do at certain times are out of place and have tried to show what would be better. I have, therefore, in displacing some of the standard studies (reading, arithmetic, etc.,) before seven years of age suggested some lines of work that are suitable for this time without drawing a line between the things that must and the things that must not be done. Indeed I should be surprised if there are not many things unnoticed in that discussion that should have a place in the curriculum. The purpose was simply to work out the principle and illustrate rather fully. And so, in the discussion of work for this stage from nine to twelve or thirteen, it cannot be said what are all the things that may be done and all that may not. But I have taken up the subjects that were discarded in the previous stage and have tried to show that they should now have quite a prominent place in the curriculum, and have made suggestions as to the nature of all the work for the entire period without any attempt to go into details. The results of my observations and studies have led me to this conclusion in regard to the work for the two stages ending at seven or eight and twelve or thirteen respectively, that the work in the earlier stage as a rule is too heavy and that too much is expected of the child; and that the work of the later stage is too light and too little *required* of the child. I wish in conclusion to emphasize the fact that many of the fundamentals in training of all kinds can be gotten only through service, through long continued application and that there is no time in the life of the individual so well suited from the standpoints of mental capital and development, and physical capital and development to drill work as the years just preceding the dawn of adolescence.

I desire to express, here, my thanks to President G. Stanley Hall and Dr. William H. Burnham for valuable suggestions and criticisms, and to Mr. Louis N. Wilson, Librarian of Clark University, for his cordiality and help in securing literature upon the subject.

No attempt has been made in this paper to treat the adolescent period. For this the reader is referred to President G. Stanley Hall's forthcoming work on the subject.

AUTHORITIES CITED.

1. BALDWIN, J. MARK. Mental development in the child and the race. The Macmillan Co., New York, 1895. pp. 496.
2. ——— ———. Social and ethical interpretations in mental development. The Macmillan Co., New York, 1897. pp. 574.
3. BARNES, EARL. Studies in education. A series of ten numbers devoted to child study and the history of education. Stanford University, Cal., 1896-97. pp. 400.
4. BROWNE, J. CRICHTON. Education and the nervous system. Morris: Book of Health. Cassell and Co., New York, 1884. pp. 269-380.
5. BRYAN, WILLIAM L. On the development of voluntary motor ability. *Am. Jour. of Psy.*, Nov. 1892, Vol. V, pp. 125-204.
6. BURK, FREDERIC. Teasing and Bullying. *Ped. Sem.*, Apr., 1897, Vol. IV, pp. 336-371.
7. ——— ———. Growth of children in height and weight. *Am. Jour. of Psy.*, Apr., 1898, Vol. IX, pp. 253-326. (Bibliography, pp. 315-326.)
8. ——— ———. From fundamental to accessory in the development of the nervous system and of movements. *Ped. Sem.*, Oct., 1898.

8a. CHAMBERLAIN, ALEXANDER, F. The Child: A Study in the Evolution of Man. (Contemporary Science Series.) Charles Scribner's Sons, N. Y., 1900. See especially Chap. IV, *The Periods of Childhood*, pp, 51-105.

9. CHRISTOPHER, W. S. Significance of infancy in human being. Trans. Ill. Soc. for Child Study (1897), Vol. II, No. 2, pp. 109-114.
10. ——— ———. Three crises in child life. Child Study Monthly, Dec., 1897 Vol. III, pp. 324-335.

11. CLOUSTON, T. S. The neurosis of development. (Morison Lectures for 1890.) Oliver and Boyd, Edinburgh, 1891. pp. 138.

12. ——. Growth and development of a child in body and mind. (Health Lectures for the People.) Edinburgh Health Society, Edinburgh, 1884.)

13. DEWEY, JOHN. The school and society. Univ. of Chicago Press, Chicago, 1899. pp. 125.

14. DONALDSON, HENRY H. The growth of the brain. A study of the nervous system in relation to education. Charles Scribner's Sons, New York, 1895. pp. 374.

15. FREAR, CAROLINE. Imitation: A study based on E. H. Russell's child observations. *Ped. Sem.*, Apr., 1897, Vol. IV, pp. 382-386.

16. GULICK, LUTHER. Psychological, pedagogical, and religious aspects of group games. *Ped. Sem.*, Mar., 1899, Vol. VI, pp. 135-151.

17. HARTWELL, E. M. Report on physical training in the Boston public schools, 1894 and 1895. (Boston, Mass.)

18. HASKELL, ELLEN M. Imitation in children. *Ped. Sem.*, Oct., 1894, Vol. III, pp. 30-47.

19. HOLMES, BAYARD. Order of physical growth in the child. Trans. Ill. Soc. for Child Study (1897), Vol. II, No. 2, pp. 201-215.

20. JAMES, WILLIAM. Principles of psychology. Henry Holt and Co., New York, 1896, 2 vols., pp. 689, 704. See also Briefer course p. 16.

21. JASTROW, JOSEPH. The dreams of the blind. New Princeton Review, 1888, Vol. V, pp. 18-34.

22. KLINE, LINUS W. The migratory impulse vs. love of home. *Am. Jour. of Psy.*, Oct., 1898, Vol. X, pp. 1-81.

23. VON LANGE, EMIL. Die normale Körpergrösse des Menschen von der Geburt bis zum 25. Lebensjahre nebst Erläuterungen über Wesen und Zweck der Skala-Messtabelle zum Gebrauche in Familie, Schule und Erziehungs-Anstalten. J. F. Lehmann, München, 1896. pp. 38. (With two measuring charts.)

24. LUKENS, HERMAN T. A study of children's drawings in the early years. *Ped. Sem.*, Oct., 1896, Vol. IV, pp. 79-110.

25. ——. A point of difference between race and individual development. Second year book of the National Herbart Society, 1896. p. 61.

26. MOSSO, ANGELO. Psychic processes and muscular exercise. *Decennial Celebration of Clark University*, 1899. (Published by the University, Worcester, Mass.) pp. 383-395.

27. PÉREZ, BERNARD. The first three years of childhood. Ed. and trans. by Alice M. Cristie. With an introduction by James Sully. C. W. Bardeen, Syracuse, N. Y., 1889. pp. 294.

28. PREYER, W. Mental development in the child. Translated by H. W. Brown. D. Appleton and Co., New York, 1893. pp. 170.

29. Report of the Massachusetts Board of Education, 1894-95. Boston, Mass., 1896.

30. ROBERTS, CHARLES. A manual of anthropometry, or a guide to the physical examination and measurement of the human body. J. and A. Churchill, London, 1878. pp. 54.

31. Ross, James. Handbook of the diseases of the nervous system. J. and A. Churchill, London, 1885. pp. 723.

32. Sheldon, Henry D. Institutional activities of American children. *Am. Jour. of Psy.*, July, 1898, Vol. IX, pp. 425-448.

33. Shinn, Milicent W. Notes on the development of a child. Univ. of California Studies. Published by the University, Berkeley, Cal., 1893 and 1899. pp. 424.

34. Small, Maurice H. The suggestibility of children. *Ped. Sem.*, Dec., 1896, Vol. IV, pp. 176-220.

35. Spalding, Douglas A. Instinct. With original observations on young animals. Macmillan's Magazine, Feb., 1873, Vol. XXVII, pp. 282-293.

36. Taylor, J. Madison. The causes of mental impairment in children. A. M. S. Bulletin, July 15, 1895.

37. Vierordt, H. Das Massenwachsthum der Körperorgane des Menschen. Arch. f. Anatomie und Physiologie, 1890. (Supplement volume.) pp. 62-94.

RECAPITULATION AND EDUCATION.[1]

By CEPHAS GUILLET.

> "Do not train boys to learning by force or harshness; but direct them to it by what amuses their minds, so that you may be the better able to discover with accuracy the peculiar bent of the genius of each."—*Plato.*

CHAPTER I.

COMPARATIVE MORPHOGENESIS.

It is widely held by morphologists that the chief ontogenetic stages discovered by embryology tally more or less closely with the chief phylogenetic types revealed by the study of paleontology and comparative anatomy. It is the purpose of this chapter briefly to indicate some of the embryological evidence upon which this conclusion is based. A table is appended showing the parallel phylogenetic and ontogenetic development of man, so far as ascertained.

The first stage at which we know any animal is that of a single cell, represented phylogenetically by the protozoan. As to the first stages through which the human ovum passes, we have no direct evidence, no human embryo being known less than about two weeks old. But as the history of all other vertebrates is much the same during the first stages of development, and the earliest known human embryos are almost indistinguishable from those of the other vertebrates at certain periods, and especially of the higher vertebrates, we are not likely to go far astray in supplying the missing stages from them.

"All metazoa," says Balfour,[2] "originate from the coalescence of two cells. The coalesced product of these cells—the fertilized ovum—then undergoes a process known as segmentation, in the course of which it becomes divided in typical cases into a number of uniform cells." The ovum and sper-

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[1] This article forms the concluding part of a work on Recapitulation, most of which was written by the writer while a fellow at Clark University. His heartiest thanks are due to the staff of the Psychological Department of that university, and particularly to President G. Stanley Hall, who suggested the subject, and under whose guidance and stimulating companionship the work was done.

[2] Balfour, F. M.: A Treatise on Comparative Embryology, 1885. This is true except in case of parthenogenetic development.

metozoon Balfour regards as representing phylogenetically two physiologically differentiated forms of a protozoan; their coalescence was equivalent to conjugation: the subsequent segmentation of the fertilized ovum was the multiplication by division of the organism resulting from the conjugation; the resulting organisms remaining, however, united to form a fresh organism in a higher state of aggregation.

As a rule, a cavity soon appears in the center of the round mass of cells, which is then called a blastula. In the case of some lower aquatic animals, the blastulæ, says Hertwig, abandon the egg-envelopes, and, since their cylindrical cells develop cilia at the surface, swim about with rotary motion in the water as ciliate spheres or blastospheres.

Now by unequal growth and division of labor, two differentiated layers of cells always result in the form of a gastrula, if we follow Haeckel, Hertwig and others, or of a diblastula, following Lankester. According to the former, the simplest and most primitive form is that of the gastrula, formed by simple invagination; while, according to Lankester, it is that of the planula, or diblastula, formed by delamination, the mouth being secondarily acquired. The result, however, is the same. Balfour, while finding it impossible to decide which of these processes reproduces the mode of passage between the protozoa and the ancestral two-layered metozoa, considers the fact well established that the gastrula, however involved, was a primitive form of the metozoa; since this conclusion is founded upon the actual existence of adult gastrula forms, namely, hydrozoa, independently of their occurrence in development. The cavity of the gastrula, says Hertwig, is the primitive intestine (archenteron) opening to the outside through the primitive mouth (blastopore), which in vertebrated animals is only an evanescent structure. And so Balfour thinks it probable we may assert that the gastrula reproduces, with more or less fidelity, a stage in the evolution of the metozoa, permanent in the simpler hydrozoa, during which the organism was provided with (1) a fully developed digestive cavity, lined by the hypoblast, with digestive and assimilative functions, (2) an oral opening, and (3) a superficial epiblast (or ectoderm). Moreover, Hertwig says, that "larval forms at this stage in the case of many cœlenterata, echinodermata, vermes and brachiopoda, quit the egg-envelope to swim about in the water by means of their cilia; and they can now take nutritive substances—small infusoria, algae or remnants of larger animals—through the primitive mouth into the digestive cavity, and make use of them in the future growth of their bodies. Likewise, the substances which are not serviceable, because indigestible, are ejected from the body through the same orifice. In the case of the higher animals, the ingestion of food is not only impossible at this time, but also superfluous, because the egg and the embryonic cells arising from it still contain yolk-granules, which are gradually consumed.''

Without going into details regarding the formation of further layers, etc., we next find the embryo in an elongated bilateral stage. ''Radial symmetry,'' says Marshall,[1] ''seen in its most typical form in the gastrula, is confined to aquatic forms.'' From the changes that take place in turbellarian worms Marshall is led to infer ''that bilateral animals are descended from radiate ancestors, that bilateral symmetry is something additional to and imposed on the radiate symmetry, and that this further modification is a direct consequence of the animals having exchanged their pelagic free-swimming habits for crawling ones; a change that would at once lead to the establishment of a difference, both structural and physiological, between the ventral and oral surface along which locomotion is effected and the opposite or dorsal surface; while the further differentiation between anterior and posterior ends would very soon follow as a necessary consequence of this same crawling habit.''

Hertwig, describing the external form the embryo now assumes, says that ''the embryonic area by means of the folding of its flattened layers into tubes forms the elongated fish-like body which all vertebrates at first exhibit.'' This fish-like or worm-like body comes to possess at about two weeks an intestinal canal with one anterior and one posterior opening in the ventral side; a neural tube (the rudiment of the central nervous system) which at first opens into the intestinal canal and soon becomes thickened at the anterior end; and a round chordal rod (found permanent in amphioxus) being the *Anlage* of the vertebral column. Several somites or myotomes are also visible and a rudimentary heart is present, while branchial clefts soon also appear. There is no trace of limbs during the first three weeks.

There is great difference of opinion among embryologists as to the significance of these changes. Dohrn interprets them as suggesting that an annelid form is a remote ancestor of the vertebrates, of which latter the ascidians are a degenerate offshoot. Semper, Poli and Minot support the annelid hypothesis; the last-named, however, regards the ascidians and amphioxus as derived from the annelids, not through the vertebrates, but through the hypothetical ''atriozoa.'' Knowalewsky considers the ascidians in the direct line of descent with the amphioxus. Haeckel[2] holds that the flatworms, the ascidians (which he classes among the worms) and amphioxus are here suggested in order. Brooks[1] agrees only as far as to regard the appendicularia (an ascidian) as the nearest living representative of the common ancestor of ascidians and chordates. Balfour concludes that "the ancestral forms of the chordata must be supposed to have had a notochord as their sole axial skeleton, a ventral mouth, surrounded by suctorial structures, and very numerous gill-slits," and he regards amphioxus and the ascidians as degenerate offshoots of this stock. Finally Willey[2] comes to the following conclusion: "The proximate ancestor of the vertebrates was a free-swimming animal intermediate in organization between an ascidian tadpole and amphioxus, possessing the dorsal mouth, hypophysis, and restricted notochord of the former, and the myotomes, cœlomic epithelium, and straight alimentary canal of the latter. The ultimate or primordial ancestor of the vertebrates would, on the contrary, be a worm-like animal, whose organization was approximately on a level with that of the bilateral ancestors of the echinoderms."

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[1] A. M. Marshall: Biological Lectures and Addresses, 1894.

[2] Ernst Haeckel: ''Anthropogenie oder Entwickelungsgeschichte des Menschen, 4te. Aufgabe, 1891.

If Brooks's view is correct, the early phylogenetic stages of development after our pelagic ancestors took to the sea-bottom were rapid. According to Fritz Müller, forms rapidly changing to other forms are less deeply imprinted in the ontogeny than those which lasted long. Besides, as Balfour points out, characters of any stage of the development which are of functional importance during a free but not during a fœtal existence will tend to disappear. It is no wonder, then, that the embryological history of vertebrates is very rapid and cursory in the early stages.

The next stage in the embryonic development of the vertebrates all embryologists agree in calling the fish stage, and of this we have very satisfactory evidence from the human embryo of about three weeks. The head is somewhat folded off from the body, and three swellings are present, representing fore, mid and hind brain; the gill-clefts are retained; rudiments of auditory, olfactory and visual organs appear as invaginations; four undifferentiated buds appear for limbs; a short tail is present, a bladder-like rudiment of lungs and rudiments of the liver and the other important internal organs. What we have is merely a higher vertebrated animal. Von Baer, Agassiz, Haeckel, Darwin, Huxley, Parker, Marshall, all agree as to the striking resemblance between the embryos of the mammal (including man), the reptile, the bird and the fish at this stage, the conclusion drawn ever since Darwin's "Origin of Species" being that the progenitor of the mammal, bird, reptile and fish had in its adult state branchiæ, swim-bladder, four fin-like limbs and a tail, all fitted for aquatic life. Parker demonstrates such a relationship by a minute comparison of the mammalian embryonic skull and face with those of the shark and skate. According to Minot it is not until the fortieth day that the form is distinctly human.

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[1] W. K. Brooks: "The Genus Salpa," 1893.

[2] A. Willey: "Amphioxus and the Ancestry of the Vertebrates," 1894.

The embryo now begins to lose the gills—which are converted into other organs—and develops lungs out of the pulmonary groove, by the lower end widening out and dividing into two forks or pouches; the branching of the lungs begins at about four weeks. The fin-like rudiments of limbs develop joints and become pentadactyl, but the fingers and toes are not separate from one another until the latter part of second month. This transition stage recalls the amphibia. "The primitive position of the limbs," says Minot,[1] "is at right angles to the body in a plane parallel with the longitudinal body-axis. The first change is the appearance of two bends which give the limb the position which is permanent in the amphibia;" and which is such that, "the ventral aspects of the forearms and lower legs come to look inwardly and their dorsal aspects outwardly, while the ventral aspects of the hands and feet look downward and their dorsal aspects upward. This change is obviously correlated with the change from aquatic to terrestrial life, and the consequent substitution of legs for fins." . . . . "The second step is the torsion of the limbs, which is similar in both pairs and occurs in all mammalia, the result of which is that the digits point headward, the first digit being in both hind and fore limbs turned toward the median line. This is the arrangement which is permanent n the reptilia and in the lower mammalia." This torsion takes place at the shoulder and hip. "The third change is the torsion of the upper arm by which the distal end of the humerus is turned over through an angle in man of nearly or quite 180°; by this torsion the head of the radius, which before the change was on the inner side of the arm, is brought across in front of the ulna to the outer side, with the result that if the hand is kept in its primitive position, palm down, the forearm is twisted in the reverse direction to the upper arm; this third change is accompanied by accessory modifications in the joints and muscles by which the radius becomes so movable that it can be employed to turn the hand with the palm either up (supination) or down (pronation.)" Rudiments of nails appear at the ends of the fingers and toes in the fœtus of 75 days; they are afterwards pushed up to the dorsal side. At four months, the spine of the fœtus still describes but a single, dorsally directed curve like that of the quadruped. In the fourth or fifth month, according to Wiedersheim,[1] the human embryo has a distinct *stratum corneum* with an epidermal layer outside it, which corresponds with the epitrichium of reptiles. This epitrichium layer appears in the third month, becomes horny and finally disappears from most parts of the body after the sixth month of embryonic life. Rudiments of hair appear at about three months; at the end of the fifth month the hairs begin to break through the integument, and in the sixth month the whole body of the embryo, except the volar and plantar surfaces of the hands and feet, the red edges of the lips and two or three other spots, is covered with abundant soft woolly hair, the "lanugo," which is normally shed before birth or immediately after, except on the face, and gradually replaced in certain parts by the coarse hairs characteristic of man. In this lanugo stage the embryo evidently repeats the lower mammalian stage, further evidence being furnished by the formation of mammary pits as in the monotremes, which give place to nipples, these being found alike in marsupials, lemurs, apes and man. The nipple does not usually become protuberant until after birth.

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[1] C. S. Minot: "Human Embryology," New York, 1892, p. 452.

The child at birth is not yet structurally a human; he is even behind the ape in some important respects. For some time after its birth, to quote Turner,[2] the infant retains the quadrupedal character of the spinal curve in the dorso-lumbar region, and as it acquires nervous and muscular power and capability of independent movement, its mode of progression in the early months by creeping on hands and knees approximates to that of the quadruped. It is only after it has attained the age of from a year to 16 months that it can erect its trunk, completely extend the hip and knee joints (which even the Anthropoid ape cannot do) and draw the leg into line with the thigh so as to form a column of support, which enables it to stand and move about on two feet. The lumbar convexity of the chimpanzee at two years is greater than that of a child of the same age. The production of the cervical convexity precedes the formation of the lumbar curve, for an infant can raise its head and take notice of surrounding objects months before it can stand upon its feet.

Co-ordinate with the curvature of the spinal column, another great structural difference between man and the other mammals is found in the hand, which, from being a locomotive organ in mammals, and in addition, a prehensile organ in the apes, has become in man a highly developed manipulative organ. Baker, Turner, and others, have demonstrated the adaptive structure of the human hand, which is capable not only, like the ape's hand, of grasping cylindrical objects, but also flat and spherical objects, and not only of opposing the thumb to the rest of the fingers in seizing an object, but also of opposing the thumb to each finger, and making delicate adjustments, while the fingers may be used independently of each other with considerable facility. This increased mobility and variety of action is brought about in two ways: first, by reducing the ape-muscles (especially the *palmaris longus*) used to assist prolonged grasp, they being no longer necessary to an organ meant for delicate work requiring constant re-adjustment; and second, by the development of new elements, and in particular a special flexor muscle for the thumb, which has been split off from the fibers of the deep flexor that bends the terminal joints of the fingers. In most apes the two form a single muscle, and in all, the thumb is but feebly developed. This special flexor muscle (the *opponens pollicis*) through its insertion into the shaft of the metacarpal bone of the thumb, draws the entire digit across the surface of the palm.

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[1] R. Wiedersheim: "The Structure of Man" (English edition), London, 1895, p. 5.

[2] Sir Wm. Turner: "Some Distinctive Characters of Human Structure," Nature, 1897, pp. 425–435.

The orang, according to Turner, and the gibbon, according to Baker, have something corresponding to an imperfect opponens muscle in the foot also, but this is lacking in the other anthropoids, which are dependent, for the opposition of the great toe, upon the adductor and short flexor muscles. In the human foot (unlike the ape's) the hallux is tied to the second toe by a continuation of the same transverse connecting band which ties the smaller toes together; there is also no *opponens hallucis*, and the short flexor of the great toe is, in relation to the size of that digit, comparatively feeble, so that no special provision is made for a movement of opposition. The reason for this is that the human foot, relegating to the hand all functions of prehension, has taken over the whole task of locomotion, for which not precision and delicacy, but size, strength and firmness are required. The increased size of the muscular calf of the leg in man is another adaptation to the exclusive use of the feet as locomotive organs. The condition of the foot in the fœtus, and also for several weeks after birth, approaches that of the ape's, the joints being so arranged that the sole can be easily turned inward, presenting the "arboreal twist" of which Huxley used to speak.

To return to the hand, the fingers have in man each two separate flexor tendons that can act to a certain extent independently. To ensure their independence they are, at the wrist, says Baker, enclosed in a remarkable tubular conduit or subway, formed by soldering the palma fascia to the wrist-bones. This destroys any effective action on the fingers of the *palmaris* *longus*, which thus, from being a flexor of all the fingers together, becomes a flexor of the wrist. Baker calls attention to the interesting fact that in embryonic life all the muscles of the anterior part of the forearm are united in what is termed the pronato-flexor mass, recalling the original condition of musculature in the earliest animals possessing limbs.

The progressive development of the hand as a manipulative organ has brought with it changes in the arm and shoulders which are described by Baker[1] as follows: "Embryology teaches, that the humerus was formerly set so that the hollow of the elbow looked inward rather than forward, and it seems, therefore, that, as the functions of the limb became more various, the lower end of the bone gradually twisted outward around the long axis until its diameter described a considerable arc. This turned the hand with the palm to the front, extended its range and adapted it for a wider usefulness. As the torsion increased some provision became necessary for carrying the hand easily across the body to the mouth. This was effected by the inclination of the trochlear surface of the elbow-joint." Again, "many movements of the arm in man are produced by muscles acting upon the shoulder-blade or scapula. As the hand was turned outward and a wider range given, these movements increased in extent and importance, and the scapula accordingly widened out at its vertebral border in order to give a more extensive attachment for muscles. In order accurately to estimate this change, the ratio of the breadth to the length of the scapula is taken. This ratio, called the scapular index, is highest among the white races, less in the infant, in negroes and in Australians, and still less in Anthropoid apes. It is significant also that the vertebral border of the scapula is the last to form in the fœtus. We have, therefore, three modifications—the torsion of the humerus, the inclination of its trochlear surface, and the scapular index—all depending upon each other, all varying together *pari passu*, and all showing a progressive development both in the individual and the race."

Structural evolution has, however, by no means reached the highest possible point. While the erect posture itself is now fully attained by the white races, the adaptation to the erect posture is as yet far from complete. The pelvis, and the digestive and vascular systems offer abundant evidence of this fact.

It is an interesting fact that the fœtus in at least the early months of its life is a cold-blooded animal, and only gradually does it become warm-blooded[2]—in this respect also repeating the racial history. The greatest care must be taken to keep prematurely-born children warm. The axillary temperature of a seven months child, says White, was 89.6° F; and even at birth at full time the temperature is only 94.5° F. Moreover the temperature of children, especially very young children, is not nearly so constant as that of adults.

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[1] F. Baker: "The Ascent of Man," Proc. Am. Ass. Adv. Sci., 1890, pp. 351-373.

[2] W. H. White: "Explanation of the Evolution of Warm-blooded Vertebrates," J. Anat. Phys., XXV (1891), pp. 374-385.

Very early in embryonic life (about the second week) a neural groove (which soon closes into a tube) forms out of the dorsal ectoderm or outer layer of cells; just as in early phylogenetic development the central nervous system became differentiated from the epidermis and travelled inwards, retaining its connection with the sense-organs (of smell and sight and hearing) which gradually evolve from the epidermis, being at first, both phylogenetically and ontogenetically, simple invaginations or pits.[1] Invagination is, however, preceded by exvagination in the case of the vertebrate retina,[2] though not in the case of the lens, In the central nervous system there next follows, both ontogenetically and phylogenetically, the differentiation of the nervous matter into an external layer of fibers (white) and an inner layer of cells (gray). The nervous axis is divided into brain and spinal cord, and at about three weeks the brain in turn divides into two parts and then, by division of the foremost part, into 3 lobes, the fore,- mid- and hind-brain. These contain the principal centers for the co-ordination of sensation and movement. The hind-brain becomes converted into the cerebellum, pons and medulla; the mid-brain into the optic lobes (corpora quadrigemina) and the cruri cerebri. The mid-brain, Minot says, grows more slowly in mammals than in lower vertebrates, its importance diminishing as we ascend the vertebrate series; while the cerebral hemispheres grow more rapidly than any other part of the brain. These important organs, according to Minot, grow out of the fore-brain, beginning already in the third week, and growing out in front and then extending back over the fore-brain. The two lateral optic vesicles are already demarcated from the fore-brain. While the hemispheres are expanding, the olfactory plate acquires a more marked differentiation beneath them and shows traces of division into a dorsal or anterior and a ventral or posterior lobe.

Through the researches of Flechsig[3] on the progressive medullation of the nerve fibers, we now know that, while the spinal cord is functional quite early in fœtal development, namely, about the fifth month, and the lower parts of the brain have completed their development already at birth, the cerebral hemispheres, on the other hand, are at birth capable of functioning only to a limited extent, a few nerve-paths mediating sensations in certain of the sensory areas, while the association fibers between the various sensory areas of the cortex do not begin to function until a month after birth. The afferent or sensory fibers are always functional before the efferent or motor fibers in the cerebrum, while the reverse is the case in the spinal cord and medulla. The first sensory fibers to become mature (from the beginning of the ninth fœtal month on) are those that conduct organic sensations, namely, kinæsthetic sensations and sensations of hunger, thirst, discomfort, and also touch and temperature impressions from the skin. Part of the organic sensations are possibly mediated exclusively by lower parts of the brain, and in particular the cerebellum, which registers many kinæsthetic sensations, and the medulla which registers hunger, thirst and discomfort feelings. A monstrosity born with only the lower parts of the brain up to and including the lower part of the corpora quadrigemina yet gave forth many signs of discomfort. Its whimperings and the movements of the extremities became more vigorous when one pinched its skin. Children born before time cry out for the satisfaction of their bodily needs. Even expressions of pleasure or rather comfort are found in infants born at eight months, in whom the cerebral cortex shows nowhere any completely developed mature nerve-elements. About the end of the ninth month the olfactory tract contains medullary sheaths. The centers for taste are thought to be located either at the edge of the somæsthetic area or of the olfactory area. The optic nerve shows medullated fibers in the middle of the tenth month; but certain visual impressions are possible at nine months (birth). The fibers of the auditory tract are developed last of all the sensory nerves. The order of development of the sensations ontogenetically, therefore, is organic, tactile, chemical, visual and auditory, and this appears to be also the phylogenetic order. About a month after birth the association areas of the brain begin to become medullated (except the subangular gyrus which receives medullation earlier), but even at three months they are still very poor in medullation compared with the sensory-motor areas. But now numerous association fibers rapidly appear, starting from the other

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[1] *Cf.* F. M. Balfour: "Comparative Embryology," Vol. II.

[2] K. Schreiner: "Histologische Studien über die Augen der freilebenden marinen Borstenwürmer," Bergens Mus. Aarborg, 1897 (1898), 30 pp.

[3] Paul Flechsig: "Gehirn und Seele," 2nd ed., 1896; "Die Localization der geistigen Vorgänge insbesondere der Sinnesempfindungen des Menschen," 1896; "Ueber die Associationscentren des menschlichen Gehirns," Dritter internat. Kong. f. Psych. in München, 1896, pp. 49-68; Zur Anatomie des vorderen Sehhügels, des Cingulums, und der

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Acusticusbahn," Neur. Cent., 1897, pp. 290-295. Ireland gives a summary of the two first named works in Jour. Ment. Sci., 1898, XLIV, pp. 1-17.

THE EVOLUTION OF MAN

According to the evidence of Comparative Anatomy, Paleontology and Embryology.

CHIEF PHYLOGENETIC TYPES.	FIRST APPEARANCE IN GEOLOGICAL TIME.	CHIEF ONTOGENETIC STAGES.
		Human Stage.
Man	Quaternary	Erect posture and lumbar convexity of the spine—manipulative hand—articulation — large and highly plastic brain.
		Imperfect Hand Stage.
Primate	[1] Miocene (of Tertiary)	Grasping objects with opposition of thumb in 4th post-natal month—medullation rapidly extending in the association areas of the brain from 4th month on,—attempts to assume erect posture in latter part of first year.
Lemnr	Eocene (of Tertiary)	
		Early Mammalian Stages.
Insectivore	Juras (of Secondary)	Formation of mammary pits about 3rd fœtal month, followed by nipples, which protrude about time of birth–larungo begins to form about 4th fœtal month, shed about time of birth—only 2 curves in the spine at birth—association areas of brain beginning to function about end of first post-natal month.
Marsupial	Trias (of Secondary)	
Monotreme	[2] Trias (of Secoudary)	
		Early Air-breathing Stages.
Reptile	Permian (of Primary)	Reptilian torsion of the limbs—fingers and toes free (towards end of 2nd month)—nails begin to form (middle of 3rd month)—Reptilian epitrichium well marked in 3rd month, later becomes horny—a single dorsally-directed curve in the spine.
Amphibian	Carboniferous (of Primary)	Lungs being developed; limbs differentiated into fore and hind, and becoming jointed, pentadactyl and webbed(about the 5th fœtal week).
Dipnoan	Upper Silurian (of Primordial)	*Water Vertebrate Stage.*
Selachian	Upper Silurian (of Primordial)	Gills, swim-bladder, fore- mid- and hind-brain, then 4 fin-like rudiments of limbs (at about 3 weeks).
or Ganoid	Lower Silurian (of Primordial)	
		Early Bilateral Stage.
Amphioxus	[3] Cambrian of Primordial	Bilateral form assumed—intestinal canal — myotomes — neural tube with thickened cephalic end–notochord (at about 2 weeks).
Ascidian (Appendicularia),		
or Worm (Annelid)	Lower Cambrian of Primordial,	
		Radiate Stage.
Cœlenterate (Hydrozoan)	Lower Cambrian of Primordial,	Radiate form—stomach and mouth (*gastrula*).
(Larval invertebrate)	Lower Cambrian of Primordial,	Cell colony (*blastula*).
		Unicellular Stage.
Protozoan	Archæan	A single cell.

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[1] Dr. Dubois has recently (1894) discovered in Pliocene volcanic deposits a new anthropoid form, which is described by O. C. Marsh as being "not human indeed, but in size, brain power, and erect posture, much nearer man than any animal hitherto discovered, living or extinct." Till this discovery no remains of apes had been found in deposits more recent than the Miocene. Others regard these remains as human.

[2] The Triassic Multituberculata are said to be intimately related to the existing Monotremata.

[3] C. D. Walcott concludes, from the finding of ichthyic fauna at the base of the Lower Silurian, that the differentiation of vertebrates and invertebrates must have begun in Cambrian time.

centers and gradually connecting all parts of the brain together. In this connection a fact mentioned by Baker is interesting, namely, that in monkeys and the inferior races the ossification of the sutures commences at the anterior part of the head, while in Europeans these sutures are the last to close. This would indicate a greater and longer continued increase of the frontal lobes of the brain, which form one of Flechsig's association areas. And, in fact, the association areas in man form much the larger part of the cortex, whilst among the other mammals only in the higher catarhines do the association spheres even equal the sensory spheres in superficial area. The lower apes, even the baboons, show only little developed association centers, and in the lowest orders of mammals there are no such centers clearly marked.

CHAPTER II.

Comparative Psychogenesis.

The progressive steps in the physical development having been indicated, a brief summary and comparison will now be attempted of the evolution, in the child and in its animal ancestry, of each of the great instincts of life.

Hunger.

The hunger instinct shows a gradual but continual progress phylogenetically from the generalized state of the amoeba by the differentiation and improvement of senses, prehensile, digestive and locomotive organs and nervous mechanism. As a rule the invertebrates feel about for their prey aided by the tactile and chemical senses, the fishes actively pursue it, aided chiefly by sight and smell, the amphibia and reptiles stalk it, while the mammals combine hunting and stalking, the apes using the most varied and intelligent methods of procuring their food, both animal and vegetable.

Hunger is the all-absorbing instinct of the new-born child as of the more primitive animals, and its manifestations increase in variety with the unfolding of the senses, the muscles and the nerves. Both phylogenetically and ontogenetically the tactile and chemical senses are the first to be actively employed. The amoeba engulfs almost anything and everything of a suitable size that it touches. Tactile and prehensile organs are found in multitudinous forms throughout the animal scale from the pseudopodia of the amoeba and the oral tentacles of the polyp to the long flexible sensitive fingers of the tarsius and the chimpanzee with which they search in holes and crannies for eggs, insects and other toothsome morsels. The child will grope about with head and hands and finally with the index finger alone. He will try to suck and swallow anything that touches the lips and cheek but soon begins the more active and successful digital explorations. The new-born child can distinguish between sweet and bitter tastes and soon learns the odor of milk. But, as with the animals so with the child, the chemical senses of taste and smell are not psychically distinct at first, and discriminability is slight. As the discriminability increases, the interest in new taste sensations becomes more marked; but the sense of smell never attains to that importance ontogenetically that it has phylogenetically, this sense being degenerate in man. The child of three months will try like the lower vertebrates to grasp objects with the mouth and chew them, while for the first year or so after he learns to grasp like the ape with the hand (several weeks later than with the mouth), everything that the hand seizes also goes to the mouth. L. Robinson[1] thinks that the infant's habit of picking up things and putting them into his mouth was at one time an important factor in determining survivorship. "In times of stress, when the hunters of the starving clan were scouring the country for prey, and the squaws were digging for roots in the forest, he busied himself in a profitable manner among the abundant debris on the floor of the cave, or experimented gastronomically with grubs, caterpillars, and other small deer, as he crept after his mother among the grass." This may account for the continuance of the habit into the second year. In the second month, if not earlier, the child begins to recognize food or the source of food by sight, a sense which, as in the animal scale, gradually becomes more and more important till the child like the ape depends mainly on its impressions in nutrition and forms many useful associations by its means. In the child's second and third years other interests rival and gradually subordinate those of taste, a process that takes place also in the animal series to a certain extent.

Self-Defence.

The skin of the new-born child like that of the very lowest animals is very sensitive to the contact of foreign bodies. The protozoan reacts to injurious stimuli by various contractile movements, such as shrinking, jerking back, and assuming a globular form, which presents the least possible surface to the injurious stimulus. Similar contractile phenomena in response to mechanical and thermal stimuli are observable in the new-born child, indeed in the fœtus. Fear in a rudimentary form seems to be an essential property of living matter. Consider the very words used to denote action in fear or expression of fear in all animals, and their connection with contractile phenomena of the skin and other parts of the body: *shrink*, *shudder*, *quake*, *quiver*, *twitch*, *writhe*, *palpitate*. G. S. Hall[1] is of opinion that the peculiar sensation induced by a minimal touch—what he calls knismesis—represents the generalized tactile sensations of primitive organisms, "the very oldest stratum of psychic life in the soul." There is considerable evidence that the skin of children during the first two years is much more sensitive than that of adults. On the other hand children during the first year seem to be less sensitive to pain than adults, which is probably paralleled by increasing sensitiveness to pain as the animal scale is ascended. The explanation is probably the same in both cases, viz., the relative lack of development of the nervous system in the more primitive and embryonic forms, which has as its concomitants imperfect powers of localization and concentration.

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[1] "The Primitive Child," N. A. Rev., 1894, Vol. CLIX, pp. 467-478.

Muscular sensations, or sensations of position and movement probably come as early as tactile sensations, both phylogenetically and ontogenetically. The phenomenon of geotropism observed for example in the cœlenterate Beroë, and the function of equilibration mediated by muscle feeling and by the semicircular canals in vertebrates, are illustrations of the instinct to keep a certain fixed position relative to the center of gravity. All animals, naturally, must reckon with gravity and equilibration-organs are among the first sense-organs to be differentiated off from the general sensory surface. We find these first in the cœlenterates, but the cilia of many protozoa probably perform the same function as the sense-hairs of the otoliths or "statoliths," as Verworn prefers to call them. The existence of a fear of falling in the new-born child is evidenced by the discomfort he shows in certain positions, by his starts of fear when his equilibrium is suddenly disturbed and his signs of distress, in Robinson's experiments, when his grip begins to loosen. In the arboreal vertebrates, and especially the apes, which are continually confronted with the danger of falling, the instinctive dread of the same is very apparent in the caution which many of them exhibit in their climbing and leaping. The keen delight shown by children and apes when tossed up and caught is doubtless due to the presence of this spice of danger and fear. The new-born infant's capacity of supporting his own weight by holding on to a rod while his toes try to curl over anything graspable is interesting as the appearance at birth of a capacity formerly advantageous in enabling mother and infant the more readily to escape from their enemies. The flexed position of the thighs of new-born children and the position of the feet which Espinas noticed in the second week turned flatwise toward each other is interesting in this connection as well as the fact noticed by him in his child on the fifth day, viz., that while no noise awakened him, yet calls with lip sounds made him shut his eyes; which may be the rudiment of a former prompt reaction to the mother's warning cry.

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[1] *Am. Jour. Psy.*, 1897, IX, p. 12.

Sensibility to light is rare among the protozoa, but general among the metazoa. As a rule the lower animals prefer the dark, while the apes are almost without exception diurnal animals, and we have even some evidence that they are afraid of the dark. The child at first shuns strong light, but this, like many other early reactions, seems to be due rather to the delicate sensitiveness of the unaccustomed nerves than to a feeling of fear. He soon shows for it a strong interest, which seems very like fascination, due doubtless to the mixture of pain and consequent fear still present. This fascination for a bright light is quite prevalent among the vertebrated animals. Later on, some children show fear of the dark, but whether this is innate or due to suggestion does not appear.

The sense of hearing proper, appears to be developed late in the animal series, namely in the fishes, and even here but very imperfectly; but even lower metazoa can perceive shocks coming through a liquid or solid medium. The child also cannot hear for from one to seven days after birth, but during this time concussions seem to be perceived, as in the case of the fish, by organs other than the ears,—probably through the general sensory surface of the child's body. Loud noises have the effect of startling animals, causing them to twitch, shrink, etc., and the same is true of the new-born child. As soon as hearing proper developed, this sense appears to have been of use chiefly to warn of the approach of enemies. The amphibian, the reptile and the mammal, all show fear of unfamiliar sounds, a fear that is also generally intense in the child, especially during the first year.

The sudden appearance of an object startles a child sometimes as early as the second month. A sudden sight has the same effect on all vertebrates, and there are certain invertebrates that are startled by a sudden shadow or a flash of light. All vertebrates instinctively fear and avoid their enemies among the other animals. This may partly account for the presence of an instinctive fear commonly observed in little children, almost as soon as they can distinguish form,—of strangers, animals and objects which resemble animals such as fur, feathers, big teeth, machines, etc., especially if they move.

Fear of water is not observed phylogenetically till the apes, a few of which are unable to swim. Ontogenetically we have some doubtful early evidence of the fear of a touch of water but none of the sound and sight of it till the second year. This dread element has left a deep and lasting fear in the human organization which is readily accounted for by the fact that man has not been instinctively able to swim since the ape stage.

Caution and ingenuity in avoiding danger increase in variety and intelligence of manifestation alike phylogenetically from the water vertebrate stage on, and ontogenetically from the fourth month on. The child has already a little store of self-defensive associations by the time he is about a year old, when he begins also to use cunning in defending and aggrandizing himself. In this the eighteen months child, however, does not surpass the sly and watchful ape. There is no satisfactory evidence of a fear of death either in animals or in little children. There is some trace in the child's second year and later of an instinctive horror of uncleanness, which may be an inheritance from his animal and especially mammalian ancestry.

The home and migratory instincts, the instincts for seeking and retaining a congenial environment, are naturally possessed by all animals and also by the child from birth. Children get well orientated to their home surroundings by the latter part of the second year, at which time they begin to wander off into the streets, to the fields or to the water.

Play and Curiosity.

Animal play begins with seemingly aimless movements and antics. In the water-vertebrate stage a prominent direction given to play is hunting; while a new expression of well-being introduced with the fishes is the making of sounds. Curiosity is plainly exhibited by the fishes. The sports of the amphibia and reptiles—including their vocal exercises—are more diverse and their curiosity keener; and this development continues steadily in the highest order of animals, reaching its highest point in the restless and inquisitive apes.

The child's play begins with vague, tactile and muscular exercises of the limbs and features which are in constant movement. The slow rhythmical movements of flexion and extension of the fingers and the rotatory movements of the wrist common in the early months, Mumford regards as survivals of aquatic locomotion. In the second and third months movements of the trunk and head are prominent. The child tries to raise itself to a sitting posture at the end of the third month. In the third month, sometimes even in the second, begins random grasping at objects. The mouth is, however, the first prehensile organ ontogenetically as well as phylogenetically. Phylogenetically it was not till the air-breathing vertebrate stage that limbs were present and not till the hand-stage that the single hand was used to grasp an object, while only the higher apes oppose the thumb. The thumb is opposed to the other fingers in grasping sometimes as early as the twelfth week and Preyer found that the thumb and great toe were able to hold anything put in the hand and foot respective at the end of the first week. It should be added that the child for some months will use feet as well as hands in feeling objects and the child born without arms learns to use his feet skillfully as hands. In the second quarter the child's head gets permanently balanced, he begins to sit alone, to move his body towards objects and to play with the things he is now able to grasp. The child is ambidextrous for the first half year at least and in most cases much longer. The apes appear to be all ambidextrous. The bilaterality of the movements of the child's limbs during the first few months is a repetition of the bilaterality of the lower vertebrates including the lower mammals. The child does not begin to use the hands independently of each other till the eighth or ninth month. Before this what one hand does the other also tends to do. In the second half year the lower limbs are constantly exercised while the child playfully learns to sit up without the aid of his hands, to roll, hitch and creep about, to stand and to stamp. In the third half year he at last learns to trot about on his feet (the instinct to do which is very early apparent) and he soon begins to extend this locomotive activity in many ways, turning, stepping over obstacles, stooping, jumping and climbing. Throwing—which no animal does instinctively and which only the ape can acquire, and that but imperfectly—is learned by the child in the second year, and much amusement is derived in the third year from watching where the things go and from throwing particular objects in particular ways, greater skill being continually desired and acquired.

Throughout this development of the child's muscles and senses through play, curiosity, as in the case of racial evolution, gain a continually increasing role. Notions of the external world are gained first of all through direct contact of objects with the lips, hands, and other parts of the body. But the eyes speedily assert their right to first place as the "windows of the soul." The child's first and almost immediate visual interest is for light and bright objects, then very soon for moving objects (which he begins to follow in the latter part of the month with the eyes and still earlier by moving the head) and then, from the second month on, with the aid of tactile and kinæsthetic sensations, for form, distance, and finally color; an order that is characteristic also of the philogenetic development of visual capacity and interest. It is pertinent in this connection to recall the exciting effect light has upon the most primitive vertebrate form still existing, the amphioxus, whose visual capacity only extends to the perception of light and shadow;

and the fascination which a bright light or fire possesses for fish and snakes and many higher animals; also the attention that moving objects invariably awaken in vertebrate animals. Again the progress of vision from monocular to binocular runs parallel in the animal and the child. There is a steady progress from the fish whose eyes are placed far back on the sides of the head and command independent fields of vision, to the ape whose eyes are placed well forward and share the same visual field. This is repeated in the lateral position of the eyes in the human embryo (which come gradually to the front as embryonic development goes on) and in their more or less independent and unsymmetrical functioning in early infancy, co-ordination not being perfected till the second month or later. It appears also that the infant's eye can be accommodated at first only for rather near vision (objects not much more or less than about fifteen or twenty inches off) and that the range of clear vision gradually increases both phylogenetically from the fishes on and ontogenetically from the second month on. The apes, which alone among the lower animals are capable of binocular vision, yet possess the power of convergence but imperfectly. We have some evidence of the existence among vertebrates of an interest in color, but the matter has received little attention. As soon as he can distinguish form, the child's attention is constantly being caught and held by some new object. From the time he begins to hear, also, the infant takes a keen delight in sounds, and early divines the direction from which they proceed, turning his eyes thither, according to some observers, in the first month and the head as well in the second month or soon after. These associations are very imperfect, however, before the third or even fourth month. Among animals we find the lower air-breathing vertebrates, and especially the lizards and snakes, much attracted by novel objects and sounds; while with the mammals the sense of hearing is exceedingly sharp and the head and ear, which in the mammals alone are movable, are turned promptly and instinctively in the direction of a sound. The child does not usually distinguish persons by their voices till the fourth month or later. This capacity the mammals, even some of the most primitive, hold in common with the child. Musical sounds early have a pleasurable and stimulating effect upon the child as upon reptiles and mammals, while the ape and year old child are alike fond of a drumming noise. Progress in discrimination proceeds so fast that by the fourth month the child already distinguishes faces and takes a peculiar and growing interest in them. The ape also is very observant of faces and capable of discriminating people by voice and looks, and forms judgments about persons as the child does from the face, voice and manner. In the second quarter the infant is fond of handling objects and is wide-awake to new sensations of touch, new sights and sounds, which he discriminates and recognizes and weaves together into a more and more intricate web of experience. He is no longer satisfied with seizing objects, but examines them and tries all manner of experiments with them, thus gaining a practical knowledge of the properties of matter. As he learns to creep and then to walk his opportunities of exercising muscle and sense enlarge, and his curiosity seems to grow more eager as the means of feeding it multiply. He carries on ceaseless investigations, and his chief delight is in objects that he can do something with; these he handles and makes to move in all sorts of ways.

So, phylogenetically, the mammal, aided by its improved senses and locomotive capacities, displays its more intense life in its playful activity and restless curiosity. The primitive mammals tumble about in the water, chase one another, and scuffle together, uttering their cries the while; and some of them display a prying disposition. But not till we reach the hand-animals do we find that habit of minute and systematic investigation so characteristic of the wonderfully observant and inquisitive ape. Likewise the sports of the ape bear a striking resemblance to those of the child. They consist of grasping, climbing, swinging, dancing, jumping, turning somersaults, screaming, drumming, scuffling, rolling, chasing, racing, riding, nursing and fussing with little animals (compare the child's passion for little animals and dolls), pretending to bite, teasing and playing tricks, destroying things, making experiments, overcoming difficulties, splashing about in the bath-tub, playing with fire and with bright objects and with other toys, making things move by striking or throwing.

The imitative instinct—so prominent in the ape also—is an additional impetus to the child's sportive activities particularly noticeable from the ninth month on; and the dramatic instinct begins to add its charm to the child's play in the second year. Animals and representations of animals are especially liked by the child in the second half year, and all kinds of moving objects together with the more striking aspects or phenomena of nature (the red sunset, thunder and lightning, the moon, the stars, bodies of water) arouse strong interest in the second half year and still more in the second year. Like the child the ape is also keenly interested in animals and it likes to look at bright colored pictures and representations of animals, which latter it often mistakes for real, showing that it resembles the child also in the precedence that sight takes of smell. There is, again, some evidence that such natural phenomena as storms, sunset, and sea arouse in the hand-animal an interest approaching the wonder of the child. There is a subtle connection between dread and liking, for no objects interest child and animal alike more than objects that are commonly objects of fear or that have already been such to the individual concerned. In the invention of expedients, in experimentation, and in the use of the method of trial and error in the latter part of the first year, the child shows considerable intelligence and judgment, being surpassed only by the most intelligent apes, namely the anthropoids, the guenon and possibly the capuchin, which he overtakes in the second year. It is significant that the child in the latter part of the first year, when placed in front of a mirror, reacts exactly like the ape, grasping at the image at first and later making a sudden grasp or taking a sudden look behind the mirror which he brings slowly towards him. The child in the first half of the second year finally recognizes himself in the glass and distinguishes himself from his own image, while the ape apparently never ceases to think that the reflection he sees is another living monkey.

In the second year, being able to move about more freely, the child begins eagerly to seek the origin and the cause of sounds—a characteristic also of the ape. In the second and third year the child is increasingly inquisitive with regard to the meaning and purpose of the things he sees. The ape shows by its actions a curiosity as active perhaps as that of a child in the middle of its second year, though the ape is not capable, like the child, of communicating in words its desire for knowledge, nor has it that capacity of understanding language which conditions the child's rapid advance in knowledge. The ape's capacity for understanding speech never takes him beyond the point reached by the child at the end of his first year, and being incapable of articulating he cannot learn even to name objects. The power to name objects adds greatly to the child's interest in them. He is quick to perceive resemblances and divides the world up into classes which grow ever narrower as new points of differentiation are observed. The child's crude reasoning in the second and third years is but another simple form of grouping by objective resemblance or contiguity, and is found quite as well developrd in the ape as in the two-year-old child.

Darwin and others assert that the ape sometimes emits a rudimentary kind of laugh when pleased. The child laughs in the second month and sometimes earlier, being particularly amused by rapid movements, while he exhibits roguishness and a sense of the grotesque early in the second year. This sense is apparently shared by the orang. The child distinguishes between greater and less in quantity or size in the first year, between one and many in the second year, and in the third has not only an idea of series but has distinct conceptions of several of the numbers, viz., one, two, and sometimes three, and may with pains be trained to still further knowledge of number. The ape is probably incapable of acquiring a conception of number. It is not till the third year that the child gives evidence of an understanding of the divisions of time, a knowledge that the ape can hardly attain to. Animals and little children alike have no thought of death, and the conception of death is one peculiarly difficult to convey to the child. By the middle of the second year, or at the latest by the beginning of the third year, the child has evidently come to clear consciousness of self as a unit distinct from the outside world which he has built up around him as his senses have developed. The interest in self is first plainly noticeable in the fourth month when the child spends much time in feeling himself and looking at his hands and feet. Then comes interest in the sounds that he makes and pride in the things that he does. With the acquisition of language this feeling of self naturally grows rapidly. The growth of the consciousness of self is also largely conditioned by the development of the child's feelings. The sensitive child is earlier self-conscious than the less impressionable. The fact that no animal, not even the sensitive ape, gives any evidence of shyness, inclines one to believe that the animals never attain to that degree of self-consciousness often reached by the child already in his second year.

Self Assertion.

In every expression of life there are probably two factors at work, the inner effort or reaction and the outer resistance or stimulus. What we call will is the predominance of the inner factor as compared with the influence of the outer. This inner force is seen to grow in strength, to become more prominent and more seemingly independent of outer forces, both phylogenetically as we ascend the animal scale and ontogenetically with the growing child. The reaction of protozoa and cœlenterates may be readily controlled by the use of various simple stimuli. The frog's reactions cannot be so readily predicted, while the ape's will is still much more developed in strength and complexity. Thus also does the child's grow from its almost passive and mechanical condition at birth to its vigorous initiative in the well-developed child of two years.

The invertebrates that we have considered as nearest the line of man's descent, when attacked, almost without exception, timidly seek to elude the enemy, and do not assume the offensive. With the development of a backbone, self assertion and anger become prominent qualities. Even the form of self assertion known as jealousy makes its appearance in the aquatic vertebrate stage, and the fishes energetically defend their property rights in food, home, mate and young. The expression of anger is much more diverse among the amphibia and reptiles than among the fishes. We find not only color-changes, sparkling of eyes, erection of appendages and inflation, as among the fish, but also sweating, foaming and the like, snapping of the jaws and, above all, rapid respiration with the utterance of various sounds. We have some interesting accounts of tyranny exerted by reptiles, especially lizards and snakes, over their fellows,. A new kind of jealousy is exhibited by the tame lizard which is jealous of attentions paid by its master to its companion lizards. But it is among the mammals that the self assertive instinct is most intense and it is among the apes in particular that its manifestations are most numerous and varied. Jealousy, teasing, tyranny, revenge, sensitiveness to ridicule, vanity, pettishness, contrariness, and impudence are characteristic of the apes, while the means of expressing anger have correspondingly multiplied, being as complex in the ape as in the year old child. In the hand-animals, too, the property instinct and the collecting instinct are strongly developed, for the apes are exceeding fond of stealing and accumulating and jealously defend their property.

The expression of angry impatience by the child is not for some time certainly distinguishable from a simple expression of pain or discomfort by crying, sputtering, wrinkling the face and shutting the eyes. But the loudness of the outcry a few days after birth, when his wants are not met, leaves little doubt in the mind. In the second month rigidity of the body accompanies violent crying. At three months the child will already ward off annoyance by the energetic use of his hands. As early as the fourth month the child has been observed to flush from anger, also to grunt, frown and twist about when uncomfortable. By the time he is one year old he will butt, scratch and bite the objects of his rage and also beat them, using first the open hand and latter (*e. g.* sixteenth month) the fist. He will also make vigorous movements of the whole body when in a passion, throwing himself about and striking out with hands and feet. When able to walk, he will give vent to his displeasure by stamping (*e. g.* 20th month). Finally, in the third year, weapons are thrown in anger.

In proportion as the child develops strength he becomes more energetic and self-willed, hating to be crossed in his little endeavors and using his nascent capacities with more and more confidence and determination. He also takes an increasing delight and pride in his achievements from the fourth month on. The instinct to show off makes its appearance about the middle of the first year or a little later. In the second year anything forbidden possesses an especial fascination, anything recommended provokes distaste, and towards the end of the year compromises are suggested. Moreover, with the heightened self-consciousness so plainly exhibited about the end of the second year comes dignity, self-respect, and a sensitiveness to ridicule. In the third year selfhood is still more strongly manifested: the child begins to show independence of thought and action, and rebellion and wantonness are very common.

The self assertive instinct takes the form of jealousy as soon as the child is able to distinguish people. The teasing propensity appears rather early in the second year and soon becomes very strong; while in the latter part of the second year the child begins to take pleasure in exercising authority over other little children and over animals and dolls, which he sometimes uses badly.

Both in racial and in individual evolution the first property is food. When, in the fourth month, the child comes to recognize mother and nurse as the source of food and loving care, they also are jealously regarded in the light of property. Somewhat later, as the power to grasp objects becomes perfected, the child begins to regard the things he lays hold of as his own and to resent interference with them. Early in the second year he begins to show thieving propensities which he finds it hard to master. Not till about the middle of the second year, with the strengthening of his social instincts, does the child begin to have regard for the property rights of others. We have evidence of the appearance in the third year of the collecting instinct, which is an interesting outcrop of the instinct for property.

Social Instincts.

As in the protozoan so in the new-born child the social instinct appears as an outgrowth of the self-seeking instincts of hunger and self defence, and the history of life, both individual and racial, is a history of the growth at once of individuality and co-operation. We have some evidence of imitation and communication in the fish, and these instincts expand rapidly in the succeeding stages, especially in the mammalian, the social stages *par excellence.* In the primitive mammals the teaching instinct makes its appearance as an outgrowth of the now highly developed parental instinct, and with its appearance the activities become more intelligent and less purely instinctive. On the other hand the filial and imitative instincts become likewise very prominent as well as the instincts of communication, notably between parent and young, when danger threatens, by cries of warning and appeal. The voice becomes more prominent in the mammalian stages as a means of communication, though gestures, movements, and postures are also found, especially among the hand-animals. The capacity of forming friendships with other animals and with man, noticeable already in the early vertebrate stages, especially the early air-breathing stage, develops rapidly in the mammalian stages, and, like the other instincts, culminates in the hand-animals, which delight to use their arms and hands in nursing and fondling other little mammals, including children, and display great affection and sympathy for their friends.

The child is by nature very sociable from the beginning. He early displays the propensity to imitate (third quarter) and still earlier the finer capacity of suggestibility (fourth month or even much earlier) and in this he resembles the apes, which also are very imitative and very susceptible to facial and vocal expression. The simpler instinctive means of communication are most common during the first year, such as various cries of appeal which appear to become intentional already in the early weeks, the smile of sympathy and sounds of pleasure, which begin in the second month, various gestures as stretching out the arms and turning away the head, the latter in the fourth month, and interjectional sounds. By the end of the first year, the child's instinctive means of expression have developed so far as to equal those of the ape, except in the case of the social emotions, such as pity and grief, which are not so deep in the child as in the adult ape. Few new means of expression are added after this: the closing of the fist and the use of weapons in anger are instances, and these are not instinctively employed by the apes. The child's ability to understand human speech equals that of any animal by the end of the first year. In the fourth quarter the child may begin to use words and by the end of the fifth quarter—in some cases a little later—he has got by invention and imitation a small but useful vocabulary. By the end of the second year the child has generally gained a fair linguistic command of his little environment and possesses a great variety of means for expressing his wants and sentiments.

The child early smiles in answer to kindly looks and gentle sounds, and even in the second month smiling would seem to be sometimes an expression of fond interest. In the fourth month the expression of affection and sympathy, now no longer dubious, begins to be more active and complex, and in the second year—sometimes earlier—the child expresses his love by many overt acts, such as kissing, hugging and caressing and (in the latter part of the year) sharing his pleasures. The child like the ape is very sensitive to cross and mournful tones and looks, showing this sometimes as early as the fourth month; while pity would seem to be felt almost as early, and is readily excited in the year old child, as, indeed, it also is in the ape. In the latter part of the second year the child becomes, like the ape, not only very fond of, but also tender towards babies and little animals, with whose nature his own is so much akin. In weakness and capriciousness of will as well as educability in self-control by appeals to the instincts, the child in the second half-year is strikingly similar to the ape, but less and less so in the second year. With the somewhat complex relations of the higher animal societies and with the performance of brave and helpful deeds under the impulse of the social instincts, there would seem to develop in the higher mammals a feeling of what is fitting and what is unseemly, and this feeling is susceptible of considerable training through appeals to the animal's instincts. The child is so early subjected to training that it is hard to distinguish in his actions the instinctive and the acquired. His instinctive sympathy, however, which may be so early aroused for his friends, is already widely extended in the first part of the second year, when he feels with any sufferer, while shame may be felt as early as the ninth month. At the same time we find in him as in the ape many a conflict between the as yet very imperfect social instinct and the more selfish instincts of hunger and self assertion. The finer exhibitions of altruistic behavior in animals are irradiations of the sexual and parental instincts, and similarly in children it is not until adolescence that altruistic feelings and aspirations take on the glow of conviction and enthusiasm.

Blossoming Periods.

Three epochs in the growth of the child stand out prominently in the first year, namely the fifth week, the fourth month and the ninth month. These are turning points or rather blossoming periods in the child's history.

Before birth there are probably no senses awake but the tactile and kinæsthetic; the fœtus does not taste, smell, see or hear. It may have vague sensations of self and certainly in so constant and uniform a medium its sensations (tactile and thermal) of environment must be still vaguer. The sucking, swallowing, and clasping reflexes are present at birth. During the first month of post-natal life the child is occupied with feeding and sleeping and with a spontaneous and very indefinite play of the senses and muscles. He makes a certain number of adaptive movements, however, in connection with the hunger instinct, being guided by touch and temperature, by taste and smell and, though later and more imperfectly than in the case of these other senses, by sight. The instinct of self-defence is also at once apparent in the infant's reactions to mechanical and thermal stimuli (tickling, pressure, cold), to loss of equilibrium, to strong light and to loud or sudden sounds. The child takes pleasure in warm air and a warm bath, in the touch of soft warm objects, soothing sounds and mild light. Bright and moving objects arouse his curiosity and, if moved slowly in a horizontal direction, may be followed by the end of the month through movements of the head and eyes. The child expresses hunger, discomfort, and displeasure by screaming, frowning, shutting the eyes and moving the limbs energetically; comfort by smiling; and fear by trembling, shrinking and starting.

The fifth week is important, as the time when the child becomes able to perceive form. This new capacity nourishes the instinct of curiosity and from now on the visual sense of form occupies a large place in the child's associative activity. During the second and third months the child is vaguely sharpening his tools and forming certain simple but important associations. Interest in objects will now cause the child to cease crying and stimulates him to reach out and try to grasp them; he thus builds up notions of space. The range of sight and the interest in sounds alike steadily increase and the association between eye-movements and hearing is formed by the fourth month. Even before the fourth month the child plainly shows that he has began to store up memories. The expressions of pleasure in particular multiply in the second and third months, as we now find laughter and the utterance of various cooing and jubilant sounds; while in painful states tears are shed, and, later, sobs are uttered.

In the fourth month we find many phenomena appearing, often with striking suddenness and evidencing an awakening mind. There is the power of control shown by his successful efforts to grasp objects and to carry the hand to and from the mouth at will. There is the intelligent observation of his surroundings seen in the discrimination of faces, in the recognition of friends by their faces and voices, and now, or soon after, in the associations he forms between objects and sounds as words to indicate the objects. Animals begin to be feared, friends in a strange garb are taken for strangers and feared, and the child begins to learn caution from experience. Then begins also the interest in self, in feeling his body, in looking at his hands and feet, in listening to the sounds he makes and rejoicing in the things he succeeds in doing. Now also his smile is plainly intelligent and unmistakably expressive of fellow-feeling, and he is sensitive to scolding and other ways of expressing feeling with regard to him. At the same time he displays his self-assertive instinct in jealousy, in gestures of refusal and in the flush of anger.

During the fœtal existence and the first month after birth the child would appear to be recapitulating the invertebrate and cold-blooded vertebrate stages; and during the second and third months, the early mammalian stages. In the fourth month, anatomically (in nervous skeletal, and muscular development), and psychically, he enters the higher mammalian stage represented by the ape, in which stage he remains for some months. During these next few months the child makes rapid progress in building up definite objects out of his sense-impressions, his space-judgments rapidly increase and improve, he gains considerable control of the muscles of the upper limbs in handling objects, and succeeds in sitting up and moving about.

In the ninth month he is seen to have attained such control of his muscles that he is now able to use the hands separately for different purposes at the same time, and deliberately to do many things that he sees or hears others do. From the ninth month on his powers of attention and imitation grow so rapidly that by the end of the year he is more educable than any animal. It is significant that deliberate efforts to talk and to walk upright—characteristics of a stage more advanced than the ape represents—begin commonly in the fourth quarter and progress together. The child's further intellectual progress is conditioned largely by his power of speech, a means of progress that the ape lacks. The ape-like creature in man's direct line of descent must have also possessed at least potentially the capacity of articulation. The potential capacity for the habit of bipedal locomotion is sufficiently indicated not only in the apes but, to a less extent, in many other mammals and even in reptiles. In the fourth quarter, then, or at latest in the fifth, the child enters upon a heredity higher than is represented by any animal with which we are acquainted. Still, while in the use and understanding of speech, in the expression of most of the emotions, in self-consciousness, in suggestibility and educability the year old child is the equal of the ape, on the other hand, in many expressions of the self-assertive and social instincts, in play-activities (but not in imaginative play), in the memory of persons and events of interest, in curiosity and cunning, in judgment and reasoning, the most intelligent apes may be compared to a certain extent with the child throughout his second year. It is probably during the second year in the main that the child repeats the history of the stages intermediate between what I have called the imperfect hand stage and the stage of primitive man. The child's intelligent use of tools and weapons during this year would seem to bear this out, as well as his growing consciousness of self. In the third year the child shows capacities that are probably purely human, as, for example, his conception of number and time, his powers of imagination, his ability to think in language and to reproduce his mental images in drawings.

In the present state of our knowledge it has been possible to indicate only the larger features and a few scattered details of the parallelism between the psychical evolution of animals and the growth of the child-mind. A minuter statement must await fuller investigations. Each one of the topics brought forward well deserves special treatment in a monograph after careful observation and experiment with both animals and children. This much is, however, sufficiently evident, namely, that the evolution of instinct like the evolution of its concomitant, structure, follows the same lines of increasing differentiation and complexity and the conquest of an ever wider environment in the child as in the animal series.

CHAPTER III.

Recapitulation and Variation Pedagogically Considered.

We naturally inquire the explanation of the facts of which the recapitulation theory is a statement. It has been held true, as regards physical form, by scientists, such as Von Bär and Agassiz, who either did not know or did not believe in what we now call evolution, but who saw in it simply an expression of the will and design of the Great Spirit. Charles Darwin seems to have been the first to put forward a natural explanation, namely, in his law of variation and inheritance. "At whatever period of life a new character first appears," says Darwin, "it generally remains latent in the offspring until a corresponding age is attained, and then is developed. When this rule fails, the child generally exhibits the character at an earlier period than the parent." Hertwig and Wilson have since demonstrated that organs of great physiological importance, as, for example, the central nervous system, tend in general to appear earlier. "On this principle of inheritance at corresponding periods," continues Darwin, "we can understand how it is that most animals display from the germ to maturity such a marvellous succession of characters." Many scientists, *e. g.*, Fritz Müller, Häckel, Huxley and Balfour, have accepted this as the explanation with certain modifications. The fact that the principle is so freely departed from shows the explanation to be insufficient. The reason appears to be deeper than this, though Darwin did not see it. He speaks of "the embryo often retaining structures which are of no service to it, either at that or at a later period of life," and says, "There is no reason why, for instance, the wing of a bat, or the fin of a porpoise, should not have been sketched out with all their parts in proper proportions, as soon as any part became visible." The reason of this is explained by His and Kleinenberg, who seem to bring us nearer the truth, while giving us a principle that is very suggestive to the psychologist and the educationist. In "*Unsere Körperform*" (1874) Wilhelm His affirms that "each stage in development is both the physiological result of the foregoing and the necessary condition for the succeeding. To attain to complex, perfect, mature forms, the organism must pass through simple, imperfect embryonic forms." "This thought," he continues, "gives a new point of view from which to regard the fact that palingenetically old forms much resemble the embryonic forms of to-day. The former are embryonic because they have remained at a lower stage of development, the latter had to pass through the lower stages in order to reach the higher, not *because* their forefathers once passed through them, but simply from the inherent necessity of growth, which must always be from simple to complex; and the similarity between ancient simple and present embryonic forms would be comprehensible even if no relationship existed." Kleinenberg in his work on the *Lopodorynchus* offers much the same explanation for the existence of imperfect or rudimentary organs. He regards them as necessary to the origin of new and more perfect organs, both ontogenetically and phylogenetically. He cites, among many other examples, the notochord, which in the embryos of the higher vertebrates, is not retained, not even improved to form the vertebral column, but is rather *replaced* by the latter which grows around it and absorbs it in due time. Kleinenberg concludes that the notochord is necessary as a *stimulus* to the development of the vertebral column. "Of course," he says, "the skeleton develops in dependence upon the activity of the musculature; this latter, however, is in turn already brought into a definite form by the presence of the notochord. The notochord thus acts as a transition organ (*Vermittelungsorgan*) in the formation of the skeleton; even though the latter contains not a single element of the notochord, still it is only explicable through the previous existence of the notochord." W. K. Parker gives other beautiful illustrations of the same law in the growth of the oak around the heartwood, and the thigh-bone in man about the small bone of the child, which becomes nothing but marrow. But if this is a law, how is it that the record is so often falsified; how is it that we have only sparse indications of the phylogeny in the ontogeny? The answer that naturally suggests itself is that from the principle of economy only those racial characters have been retained that are necessary for the proper development of later and higher characters.[1] If this is so, the importance of palingenetic characters, both physical and psychical, is the more manifest.

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[1] A. Sedgwick holds a view that is quite reconcilable with this opinion. In his opinion "ancestral stages of structure" (and doubtless he would also hold *of mind*) "are only retained in so far as they are useful to the free-growing organism, *i. e.*, to the larva" (and may we not

His's view, as he says, is not in opposition to the principle of descent itself, but it goes deeper; the fundamental cause he holds to be physiological and mechanical. And yet if one examine closely, one will find that though we have got farther we still have not the whole truth. "Differences in growth of different cells," says His, "cause new tensions according to which various folds and parts are formed." And so he formulates the law that "similar forms arise from similar material, when it offers similar conditions as regards absolute dimensions." But, we may ask, whence arise the *differences* in growth that in turn cause *new* tensions and the rest? There is no answer. E. B. Wilson,[1] indeed, confesses that "we are still profoundly ignorant of the nature and causes of differentiation and of its precise relation to cell-formation." As for Darwin's Law of Correlated Variation, Cope's Law of Acceleration and Retardation, Roux's Interselection, Minot's Post Selection and Weismann's fine-spun theories, while they certainly add light, they yet render our darkness as to the main point but the more visible. There seem to exist both an inner and an outer cause—the inner impetus being the tendency to vary, and the outer stimulus being the environment. But where the one begins and the other ends, it is impossible to say; they seem inextricably bound up together. In attempting to lean on either the one or the other, we are likely to beg the question continually; while by keeping both in view we find ourselves in a vicious circle, which has no beginning, and we are likely to conclude in despair that to know anything we must know all.

Whether the parallelism observed between the mental evolution of animals and the psychogenesis of the child be due to heredity or be but an illustration of a general law of growth—and it may be both—the fact of parallelism is patent enough, though often blurred either through insufficient observation or through the supervention of other principles and factors, as, for example, the differences that must obtain between adult and embryonic forms of life, and the necessity for condensation in the case of the embryo. The recapitulation theory may be only the statement of an analogy or a parallelism without any basis

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add *to the child?*) "in its free development. . . . . The only functionless ancestral structures which are preserved in development are those which at some time or another have been of use to the organism during its development after they have ceased to be so to the adult."—"On the Law of Development known as von Baer's Law and the significance of ancestral Rudiments in Embryonic Development." Quart. J. Mic. Sci. XXXVI (1894), pp. 35–52.

[1] The Mosaic Theory of Development: Biol. Lectures, Mar. Biol. Lab., 1894, p. 14.

in heredity properly speaking. It may be in the nature of living matter to go through immature stages which depend on the constitution of the matter and not necessarily on the course taken previously by similar matter. An explanation of the phenomena altogether apart from the recapitulatory one is often at hand and is probably always possible, but this does not lessen the significance of recapitulation but increases it. Indeed, if Weismann's theory is true, the living matter of to-day has never phylogenetically passed through any stages, but is a part of or directly derived from the original protoplasm which is continually unfolding in new directions and forms. Still as each new form most resembles the immediately preceding, the germ-plasm giving rise to it must also resemble it potentially more than it does previous forms. Hence, on this theory, the evolution of forms of life proceeds *pari passu* with and is dependent upon the evolution of form potentially in the germ-plasm, the environment having merely a selective influence. But even so, the facts of analogy are none the less interesting. As in the physical world, so in the psychical there is a natural order of growth. Since it is the order of nature that the new organism should pass through certain developmental stages, it behooves us to study nature's plan and seek rather to aid than to thwart it. For nature must be right; there is no higher criterion. There is therefore no study of more vital importance to the educationist than this of the natural development of organisms. The parallelism of phylogeny and ontogeny enforces the argument in favor of natural development and the doctrine of katharsis[1] or psychical vaccination as applied to the moral growth of the child. It furnishes a double support to the view that education should be a process of orderly and gradual unfolding, without precocity and without interference, from lower to ever higher stages; that forcing is unnatural and that the mental pabulum should be suited to the stage of development reached. So long as we keep the end in view and do not cause the child to linger in any of the stages we need not fear the discipline that each stage is calculated to give as a preparation for the next. For what Von Baer long ago said of animals is true also of the child: "The type of each animal appears to fix itself at the very beginning in the embryo and to dominate the whole development."

The period of animal recapitulation is short. In this work the attempt has not been made to deal with the recapitulation of human stages of development, but reasoning from the fact that the length of time taken to recapitulate a period does not depend upon the duration of that period phylogenetically but upon its recency, we may conclude that the recapitulation of human stages of development is much longer than that of the longest animal stage, viz., the ape-stage. If we ever succeed in establishing these human stages they should form a norm for the education of children, which in its earlier stages should be generalized and recapitulatory rather than specialized and individual. Recapitulation and variation are complementary, and, as the child develops, recapitulation becomes of less and less moment educationally and variation more and more important and *massgebend*. We know, for example, that the human mind developed in close union with the development of the body in hunting, in warring, in making weapons and tools, in tilling the ground, in domesticating animals, in cooking, building, etc., and the child's mind should be permitted to develop in a similar manner. All the great primitive crafts should be represented as far as possible in their most elementary features in the education of the child.[1] Only by passing through these old racial stages does the child get natural preparation and stimulus for the proper development of his own individuality. It is earnestly to be hoped, however, that even after these recapitulatory stages have been established, it will not be attempted to make a stereotyped curriculum of them. For children show all kinds of irregularities of development, which the teacher is bound to take account of. The bane of pedagogy has always been the tendency to systematize, from which even the greatest educators have not been free: witness Comenius, Pestalozzi, Frœbel and Herbart. While phylogeny has great suggestive value, ontogeny will always be more important for pedagogy. Nature will generally sufficiently indicate in the ontogeny that which is important to recapitulate; at the same time the study of phylogeny should endue us with insight and wisdom to take the hints that ontogeny gives. And when the period of specialization *par excellence* has arrived, the child's specialization should not be controlled for him by a cast iron system of class education; it should follow naturally the child's bent wherever this can be clearly discovered. And even if the bent should be in a different direction later on, let us follow—with caution, to be sure—still let us follow rather than lead there also, for the child's development is not necessarily, nor indeed generally, in a straight line.[1]

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[1] For the Aristotelian theory of Katharsis see Benn's "Greek Philosophers," Vol. I, p. 305. Compare G. S. Hall's application of this to development, *Am. Jour. Psych.*, Vol. IX, pp. 16 and 17.

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[1] For an appreciation of the educational value of gardening and the description of an ideal school-garden see "Die Erziehende Bedentung des Schulgartens," by O. W. Beyer; Langensalza, 1895, H. Beyer & Söhne. For an account of the aims, principles and methods of sloyd carpentry consult "The Theory of Educational Sloyd" and "The Teacher's Handbook of Sloyd," by Otto Salomon, 2nd ed., 1896. Silver, Burdett & Co., Boston. John Johnson shows in an exceedingly interesting way the development of a primitive sort of land tenure, legislation, judicial procedure and industry among the boys of a large school in Maryland, situated on a farm of 800 acres. "Rudimentary society among boys," Johns Hopkins Univ. Studies in Hist. and Pol. Sci., 2nd series, No. 11, Baltimore, 1884, pp. 9–56. Reprint, McDonogh, Md., 1893.

It comes out with great clearness from this study that while there is no such thing as an innate idea, still the mind of the child is not to be compared to a *tabula rasa*. The mind of the child is not merely nor chiefly receptive, but creative,—not passive wax to be moulded, but a living, active will, a bundle of instinctive tendencies to growth, within which his destiny is enwrapped. This is the fundamental part of man and conditions the more conscious part and will condition it as long as man exists. Instinct, not intelligence, still leads evolution. Intelligence is continually baffled and superseded, but instinct displays itself with the old vigor in ever new forms. It plays upon the intellect as upon a musical instrument and startles the old world every now and then with a new song.

It is the first business of the educator to discern these instinctive tendencies. And this he must do not only in the child as a type, but in each individual child with whom he deals; for there is no scientific principle better established than that of variation and none of more far-reaching importance. Biology teaches us that it is the over-specialized species that have always succumbed in the struggle. Man owes his pre-eminence to the fact that he is born an immature and generalized form and long retains this condition of plasticity. For this gives opportunity for the development of new and progressive variations and adaptations which keep him ever in the van of progress. Thus the crude early period of life, which Descartes so much deplored as a useless, nay, a positively noxious period, is, on the contrary, the very salvation of our race. Far from pessimistically seeking to tear down and rebuild the natural structure of those early years we should put faith in the promise of childhood and build reverently and hopefully upon the foundation it offers to our hand. If we should reverence the old man as representing the wisdom of the past, still more should we reverence the child, for he comes bearing the more glorious future. The Weismannian theory is at all events right in the emphasis it places upon the all-powerfulness of mother-nature and the futility and folly of struggling against her. It were better to study her plans and enlist in her service. Amid the dense mist of the Weismannian controversy, therefore, the teacher's course at least is clear. Wise education and improved environment consequent thereon favor the development, if not the appearance, of the best variations, which, once having appeared and developed, are the more likely to be handed down. Consider for a moment the case of the dog. If the variation of pointing, latent in the dog, if you will, had never been observed, seized upon and developed by education, we should have no pointers to-day. The latent or potential variation would have remained latent and selection could have taken no account of it. Education, then, may control variation and through variation selection and mould the child and the race to their best possibilities. The teacher's aim therefore—an aim which demands the highest order of ability—is to seek out the child's own best possibilities and educate these to the highest degree. And he can best find and feed these by offering to the child a varied diet suited to his stage of development, not attempting a systematic and specialized regimen in the first few years; for the child is his own best teacher. In other words, the educator must feed the child's germinal tendencies as they appear with the rich sensuous and motor experience that they call for, trusting to the child to respond to the healthy stimulus. If we cage a bird in the act of migrating, it is in vain that we offer him crumbs and berries, he leaves them untouched and beats his wings against the bars of the cage till he be given the free air and sky.

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[1] *Cf.* E. G. Lancaster: "The Psychology of Adolescence." *Ped. Sem.*, Vol. 5, 1897, p. 120: "The growth of the mind may be compared to a circle which enlarges by extending one sector at a time out to a new circumference."

The instinct of imitation, if we may call it an instinct, is not simple but presupposes the working of other instincts. The actions we imitate are those for which we have a natural bent, the acts of others serving only as stimuli, which may suggest like acts in us but do not necessarily unless we are by nature inclined to such acts. It is for this reason that the child is so suggestible, namely because his unformed mind is in an extremely generalized and plastic condition with a strong bent for experimentation in all directions. Here lies at once the strength and the weakness of childhood. And here lies the reason why early education should be broad and liberal, seeking to feed *all* the child's budding possibilities and not to determine his growth for him. Thus the child's predominant instinctive tendencies will have opportunity to develop in a natural and timely way into effective habits.

It becomes the teacher's duty, then, to examine the various kinds and modes of nutrition administered in the past and to keep his mind open for new and better ones. The old standard foods we are pretty well acquainted with. In the main the over-systematized plays and occupations of Frœbel, often unhygienic and unpsychological,[1] reading, writing and arithmetic, the catechism, grammar, formal essay writing and mechanical drawing, morbid gymnastics and a certain kind of history, literature and geography administered in very meager and systematic doses. The new foods, myth and story and proverb, free play, marching[2] and dancing[3] to good music, singing within the compass of the child's voice, and drawing, based on the child's own interest and fancy,[4] and nature study; leading in naturally manual training (with a view to making a *boy*, not a tool), and the three R's or rather including religion the four R's, together with linguistic reproduction, wide reading, art and science in proportion as the boy develops interest and capacity. Such a diet, administered with pedagogical insight and tact, could not but produce sound, sweet, vigorous youth, ready for the great examination of Life which searches all men. Synthesis—the building up of large synthetic views—comes late and should be allowed to come of itself, the teacher only taking care that plenty of good elements be given.

At the very beginning a study of the development of curiosity clearly suggests the importance of making the young child a companion of the bright flowers, the gay and musical trees and birds, the lively and playful animals, and of taking him to see men in action, as, for example, the various tradesmen at their work as well as the work going on about the house. He should be taken to fairs and festivals, shows and circuses, races and sports of all kinds and museums of art and nature. In this way the child's mind will be opened and enriched and his ambition stimulated. It is unfortunate that puppet-shows are so rare, when we consider the child's great natural love and creative genius for the drama.

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[1] In his study of motor ability (*Ped. Sem.*, 1894, III, 9–29) J. A. Hancock criticises as unnatural certain kindergarten methods that call for very fine and accurate muscular adjustments. F. Burk, indeed ("From fundamental to accessory in the development of the nervous system and of movements," *Ped. Sem.*, 1898, VI, pp. 62 and 63), is of the opinion that accuracy is not to be aimed at till the ninth or tenth year, because it requires a control that is not natural before then. For other criticisms not altogether so sound of Frœbelian methods, see N. Oppenheim's "Development of the Child," 1898, Chap. V. This writer puts too much emphasis upon knowledge, and entirely overlooks the unconscious or the sub-conscious, whose realm is wide and important, particularly in child-life.

[2] There are several little books containing pretty, graceful drills and marches for children with fans, brooms, flowers, dolls, flags, shepherd's crooks and the like. But these express only one side, and that the shallower side of child nature. What we need is a great artist who shall compose choral marches and religious drama for children or in which children shall bear a part.

[3] Of course, only quadrilles and simple dances under healthful conditions are meant.

[4] For an original use of drawing as a pedagogical device see C. A. Scott's article in the Transactions of the Illinois Society for Child Study, 1898, (Vol. III, No. 1,) entitled "Children's fears as material for expression and a basis for education in art."

While the child is in the stage of keen interest in the names of things, advantage should be taken of this interest in language to give him the names not only of common objects but of the various animals and plants in which he is interested, that he may associate the appearance, sounds, habits, etc., of each as a unit with its proper name. The importance of language in adding definiteness and durableness to impressions and ideas and in widening the sphere of observation and interest can hardly be overestimated. The interest, however, must come before the name and it should not be attempted to stimulate analysis and abstraction by talking to the little child about 'elipses' and 'petals' and 'molecules,' and training him to experience and name sensations and qualities which he has no interest in as such.[1] To do this is to give him information which cannot be of any use to him and which can have only the driest kind of pedantic interest. But to teach him the names of birds and insects, of flowers and trees, standing for what they represent as wholes, is to stimulate his interest in the beauties of nature and make his life richer and happier.

I have met a university graduate who did not know a carrot from a parsnip, and yet he hailed from a great agricultural State and was at the time an instructor in botany in a far-famed university. Many city children have never seen common farm animals, such as the cow and pig, their ideas of them being derived solely from pictures; so that some even think the cow a tiny animal about the size of a mouse.[2] Such children are being starved not only in one of their strongest interests, but also in language and ideas, for all languages are replete with metaphors, proverbs and other folk-lore which allude to animals and plants and which must therefore remain meaningless to them.

The neglect of common and yet beautiful and stimulating things by educators is further evidenced by the prevalence of color-blindness, not in the technical but in the æsthetic sense of the term. While having a crude sense of color, we are still apt in most cases to see only relative light and shade, and these but superficially. The changing hues of the water and of the distant woods, the red sun after rain falling upon the wet road-way, the varied tints of grasses, soil and snow, sky and cloud, all escape us. It is beautiful things above all that the child should be given to see and hear, for he has while quite young an instinct for the beautiful. Childhood is the time to attune the soul to beauty of form and color, to melody and harmony. The child is, moreover, an out-of-doors animal; he belongs to nature, and one can do him no greater service than by developing his love and appreciation of the beautiful in color, in bird-song, in cloud-form and in the scent of woods and fields. It were wise to develop in childhood and boyhood the love of the beautiful as a preparation for the appreciation in maturer years of poetry and art, as well as for the sake of its immediate ethical value in the culture of the feelings.

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[1] R. P. Halleck in his "Education of the Central Nervous System," 1897, lays much stress upon sensory training. But the course of sensory training recommended seems too specialized and conscious, not to say pedantic, for normal children.

[2] *Cf.* G. S. Hall: "The Contents of Children's Minds," reprinted from Princeton Review, 1883, by Kellog & Co., N. Y.

The intimate connection that we have seen to exist between curiosity and the play instinct, of itself suggests the importance of stimulating the development of the child's mind through the motor as well as the sensory channels. Children, and, indeed, adults also, learn best by doing, because they cannot do without attending. Any one who has studied one science by listening to lectures and reading books and another science or the same science later by working in the laboratory and the field, will have fully experienced the truth of this statement. This truth has not received sufficient application in our systems of sedentary education, particularly in the primary grades, where the application is most urgent. Every part of the living body is also in effect part of the soul, and the atrophy of any part of the body involves the partial paralysis of the soul. While true of every single tissue, this is most strikingly illustrated by the eye, the ear, the voice and the hand, the four great organs and avenues of the soul. It is strange that the hand, which has been of so vast importance in racial evolution, should be so much neglected in our educational systems. The little child in his self-activity teaches us better. If instead of the word "soul," as used above, the word *brain* is put, the statement will be more scientifically accurate, but practically amount to the same thing. The cerebrum, according to Flechsig, is divided into sensory areas and association areas. The sensory areas are at the same time motor areas, and this is especially true of the great somæsthetic sphere. The association areas, although penetrated by a few projection fibers, are in the main each a great net-work of paths between the various sensory-motor spheres. Moreover, the somæsthetic region is far richer in association systems than the other sensory regions, and indeed is intimately connected with all parts of the cortex. These facts clearly indicate the importance of uniting sensory and motor in education if we would wake up all the nerve-cells, make a well-developed, well-knit brain, a strong personality.

It is now admitted that the attempt to educate by direct appeals to imagination and verbal memory without the mind being previously enriched with images drawn from experience, is absurd. It is also beginning to be seen that education built up on a sensory experience that excludes the kinæsthetic element, no matter how otherwise rich and varied the sense-images, is and must be lop-sided. Indeed motor training is in a way more comprehensive than sensory, for while sensory training in most cases involves but little motor training, to wit: of the nervous centers for the sense-muscles (of great significance to be sure), motor training involves very great and varied use of the senses. "In most composite movements," to quote Du Bois-Reymond,[1] "something else than the control of the muscles by the motor-nervous system comes into consideration. The sight, the sense of pressure, and the muscular sense, and finally the mind, must be prepared to take in the position of the body at each instant, so that the muscles may be in a proper state of adjustment." The unity of sensory and motor is best seen in the hand, in which they are equally important and blend in a beautiful way that makes this the greatest organ of the soul and its training of the very highest value. Furthermore, motor training is of the highest significance for the training of the will, for the education of the will practically consists in the development of the co-ordination of muscle and mind. Flabby muscles of sense and movement, lazy observation, slovenly thought, atrophied emotion, all belong together, and are inconsistent with strong will-power. Thus all training, whether ostensibly directed to the body or to the mind affects the will, and that form of training which co-ordinates skillful and varied use of the muscles with observation and thought must afford the most effective education of the will.

The teacher should not single out any of the child's senses or muscles or groups of muscles for special direct training, not even the hand, voice, eye or ear. He should never forget that he is training a child, not a collection of senses and muscles. A method of training the will such as Seguin's,[2] which is successful with idiots, is not therefore necessarily to be recommended for normal children with muscles in good tone and minds wide awake and full of interests. In training the idiot, the object is to arouse interest; in educating the normal child, the object is to feed a spontaneity already abundantly present. In the case of the indifferent idiot, the training must be much more formal and systematic and the sole aim and result is to bring him to a condition weakly resembling that which the normal child naturally and speedily reaches by himself.

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[1] "The Physiology of Exercise." Pop. Sci. Mo., 1882, Vol. XXI, pp. 326 and 327.

[2] E. Seguin: "The psycho-physiological training of an idiotic hand," and of "an idiotic eye." Archives of Medicine, N. Y., 1879. Vol. II, pp. 149-156 and 1880, IV, pp. 217-233.

The training of the first few years—if one may judge from observation of the child—should in the main be of a large and general character, calling into play the harmonious and pleasurable action of as many muscles and senses as possible. There is nothing so healthful as pleasure, as cheerful interest. The little child of kindergarten age and under should be given tools, such as hammer, spade and wheelbarrow, suited to his strength, and plenty of large things made of various materials which he can handle and move about, for he takes a delight in putting forth his strength and overcoming difficulties, in getting practical acquaintance with the properties of matter and developing his kinæsthetic senses. It is not meant that this is his conscious aim, but the attainment of such knowledge is the practical result and the real source of his interest. E. Seguin[1] emphasizes the importance of meeting even the suckling's wishes in this regard: "To see and not to be able to reach, to perceive images with no possibility of seizing the objects, renders the infant impatient, fretful or unconcerned, and opens an era of exaction upon others, or of diffidence of himself, or of indifference for any attainment, which unavoidably ends in immorality or incapacity, or in both." The child should be given materials with which he can build (sand, large blocks, bricks, etc.), for he is a born architect, and divers simple mechanical contrivances upon which he may exercise his genius for investigation and experimentation.[2] He should also be put in the way of making objects that may serve as toys or as useful articles for the home, for the child delights to serve. In this way both self-assertive and social instincts would be appealed to and developed.

By the games that they have themselves created, chiefly through inheritance and imitation and partly through invention, children plainly tell us what their education should be,—to be left alone as much as possible with their games of strength and skill, of experimentation and imagination.[3] This is nature's way of educating the child, of making him intelligent and fitting him for the complex environment of manhood. By standing over the child and dictating its education, by imposing upon it his own habits of thought and action, the teacher thwarts the work of nature and makes a machine, not an intelligent, adaptable and virtuous man. If nature had intended to make a perfect piece of mechanism, she could have accomplished it by making a creature of full-formed habits and reflexes. But this nature does only in the case of the very lowest animals. As the animal scale is ascended we find more and more that the young must learn for themselves, and this they do in their play.[1] Among the higher animals, however, the parent often helps its young to learn, and the instinct in man to teach the young is a deep and true instinct.[2] But the human teacher, if he but try to interpret the purposes of nature, will see that it is not the lesson, the piece of work, the rule, the principle, the idea, that is of the first importance, but the intelligent mind which does the work and which wins the idea. He will also see that any system of training, whether mental or physical, whether grammar or gymnastics, which has from the child's standpoint no aim or interest but "the development of the mind" or "the perfecting of the body," is morbid and unnatural in principle and liable to do more harm than good in practice. Such aims are for the teacher, not for the pupil. For the pupil the work must be in itself calculated to arouse his interest and stimulate his best efforts, apart altogether from its supposed effect upon his mind or body. "Mental discipline" has but too often been the cry of defence of bad teachers and bad pedagogy. The introduction here and there in our schools of the school-garden and sloyd carpentry to supplement free play is an encouraging sign and must have the happiest results if only the true aim be kept in view. The principles that should govern motor training have been concisely stated by Gustaf Larson in a definition of sloyd: "Sloyd is tool-work so arranged and employed as to stimulate and promote vigorous intelligent self-activity for a purpose which the worker recognizes as good." With the rapid increase of urban population and the failure to set apart fields and groves in sufficient number and extent,

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[1] Pop. Sci. Mo., 1876, X p. 40.

[2] E. H. Lindley treats the puzzle interest in an original and interesting way in *Am. Jour. Psych.*, 1897, VIII, 431-493.

[3] See Alice B. Gomme's charming little book "Children's Singing Games with the tunes to which they are sung" (Macmillan's, 1894), and "The traditional games of England, Scotland and Ireland," by the same author; also W. W. Newell's "Games and Songs of American Children" (Harper Bros., 1884). For a beautiful instance of self-education through play, see "The Story of a Sand-Pile," by G. S. Hall, reprinted by Kellogg & Co., from Scribner's Magazine for June, 1888. The advantages of free play are well set forth in an article by J. L. Hughes, "The Educational value of Play and the recent play move-

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ment in Germany," Ed. Rev., N. Y., 1894, VIII, 327-336. Du Bois-Reymond ("The Physiology of Exercise," Pop. Sci. Mo., 1882, XXI, pp. 441, *et. seq.*), considers German turning superior educationally to English sport, particularly because "it results in a more equable perfecting of the body." It would seem that the German system should conduce rather to strength than to a healthy, natural development, and had best be used chiefly as a medicine to supplement sport.

[1] *Cf.* Gross: "Die Spiele der Thiere." 1896.

[2] *Cf.* D. E. Phillips: "The Teaching Instinct." *Ped. Sem.*, VI, 1899, pp. 188-245.

the conditions for healthful early training are continually becoming more difficult. Hence the growing necessity of artificially creating healthful conditions of early development by establishing playgrounds and erecting pavilions for the children of cities. S. V. Tsanoff has profoundly felt this need and outlines his plan for meeting the abnormal urban conditions in his book "The Educational value of Children's Playgrounds. A novel plan of character building."[1] The novelty of Tsanoff's idea consists not in recognizing play as a means of character-building, but in organizing and exploiting play consciously for that purpose, much as Frœbel organized it mainly for intellectual purposes. But surely here as in the kindergarten the best teachers will be those who need to interfere least; for children learn much better, much more naturally and practically from each other than from teachers. There is one function, however, that the teachers might perform to great advantage in these gatherings of the children, — namely, *story-telling*. This might be made of great educative influence and prepare the worse spirits to join in the sports with a good will.

The child's initiation into the delights of nature and history should begin at home in the natural history and culture history of his own neighborhood. By taking care that the child's associations with home are rich and full, we shall provide for the man an inexhaustible source of inspiration.[2] With this end in view the following is suggested as a sketch of an ideal curriculum for an American or Canadian school, depending for its success not upon text-books, examinations, and all the other impersonal paraphernalia of our systems of education, but solely upon the ability of the individual teacher. First, a study of the rocks and minerals of the neighborhood and the products thereof, as pebbles, sand, clay and soils. Second, a study of the topography and climate of the district. Third, a study of the plants and their relation to soils, together with work in garden and orchard, if possible; also a study of the woods and work with them *à la* sloyd. The wood-work should be co-ordinated with the Natural History in the making of shelves and cabinets for specimens, weather-vanes, bird-houses, and the like. Fourth, a study of the wild animals and the relation of the fauna with the flora, the climate and the topography of the district. The close connection of the industries of the neighborhood with the presence of these various natural conditions and products should then be noted: as mining, agriculture, lumbering, manufactures, commerce and navigation, and the accessory trades and professions. It should then be pointed out that such a collection of persons is a community with a thousand subtle interrelationships and interdependencies. A study of the government of such a municipality will then be in order, commencing with its present state and tracing it back to its beginnings, while showing the connection between this development and the growth of the community. Then the primitive savage community that preceded the coming of the white settler should be described and richly illustrated by Indian myth and story. Lastly, the perspective of geography and history should be widened outward and backward to include the county and district of which the community forms a part, then the province or state, then the country the continent, the empire, the world; the whole being continually illustrated by song and story drawn from the literature of the people in its various stages of development.

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[1] Philadelphia, 1897.

[2] *Cf.* Vachon: "Rembrandt als Erzieher," and Sir A. Geikie: "Types of Scenery and their Influence on Literature. London, 1898.

The study of the physiography, natural history and industries of the neighborhood should be observational. Two or three afternoons a week, at least, and occasionally a whole day should be spent in walks and excursions to the fields and woods, the mountains and waters; to mine and quarry, lime-kiln and brickyard, foundry and machine shop; to market and fair, farm and sugar-bush, mills and factories; to canal locks, harbor, lighthouse; to the shops of the shoemaker, carpenter, horse-shoer, etc.; to large stores and warehouses; to law courts; to public buildings and works; to museums and fish-hatcheries, and to art galleries. The children should be taught how to find their way through the woods with and without a compass, and should be exercised in mimic bush-warfare and scouting and the sports of the season.

Individual collections should be made of the rocks, minerals, fossils, soils, woods and shells in the autumn term, and of pressed flowers, of moths and butterflies and other insects in the spring term. The school should also have a little museum, the best specimens being reserved for it. The flowers, leaves and birds should be drawn and painted and accounts given orally and in writing of the various excursions. Maps, topographical charts, clay models and sketches should be made, as well as records of the observations of nature, including the weather. Such a course should be begun in the kindergarten, the little ones being taught to collect flowers and leaves in spring and fall and to note their characteristic shapes and colors; to collect mosses, budding twigs, evergreen branches, nuts, berries, grain, seed, birds' nests, fruit and vegetables in the fall; and tastefully to decorate their room with these natural objects.

In this way observation and imagination, emotion and reason will develop hand in hand and not be separated as they are by our unnatural pigeon-hole methods of education. The child will be learning geography, geology, botany, zoölogy, history, literature, composition, drawing, painting, singing, manual work, in fact about everything, except mathematics, that is found in a school curriculum and much besides, and yet, learning them in a natural and coherent way, he will not feel burdened with a multiplicity of subjects. All will seem one subject, and each part of the work will derive interest and stimulus from the others.

Childhood is the time for the cultivation of the tastes both physical and psychical. Our ordinary conception of child education is too low and narrow. Nothing is too good for the child. His mind is vastly larger than our curricula. The truly great teacher is he who can reach out in all directions for an abundance of the best culture-material and work it over for the child into a fit state for him to digest. This is the primary teacher's true specialty—not to know one subject thoroughly as a specialist in that subject, but to have a rich store of information and accomplishment drawn from all sides, from nature and art, from history and literature, and from a wide experience both motor and psychical, and to be able to present this in a form suitable to his pupil's stage of development. In a word, the primary teacher's aim should be to make the child's mind a generously endowed apperceptive organ. The metaphor used, however, has its limitations, and in using it one runs the risk of being misunderstood. The teacher will need to exercise much judgment in seeing to it that the child earns this food over again for himself, and does not gulp it down passively in the old gradgrind way.

Children are naturally naïve, credulous, lovers of nature, eager to please, eager to learn, eager to do things. Why then these plaints we so often hear from both teachers and pupils? "I detest teaching!" "I hate school!" This is partly due to the almost purely sedentary, bookish and machine-like education given in our schools, curbing the child's vigorously sprouting will, repressing his beautiful play-instinct, constraining his rapidly waxing strength, his growing muscles tingling and hungering for activity. The early prominence in the child's speech of verbs and words used with verbal force is an evidence of the child's keen interest in activity.[1] At 8 years of age children are much more interested in the action of objects than in any other attribute;[2] and from about 5 to 9 years of age they are especially fond of representing action in their spontaneous drawings.[1] The healthy child is by nature *actively* receptive and must rebel or sicken under a cramming system. In the generalized state of his consciousness the child naturally reaches out in all directions for new experiences of taste and sight and sound, movement and emotion. He loves to impersonate people and animals and to make believe that one thing is another. He will be everything and do everything. That is the form which the self-assertive instinct takes at this early age. How unnatural to chain such pulsating life to a desk and enshroud it in a narrow school-curriculum! We rob him of his childhood by our forcing methods of confinement, silence and routine. Both before the "school-age" and during the first few years of school-life, we do the child injustice by making him the slave of a few definite habits, at a time when he would be still testing himself in all directions. We ought not to impose habits upon him but leave him to choose those directions most clearly indicated to him by his instinctive tastes and interests. It is for this that nature gives man a long period of immaturity—for this and for the building up of a strong physique to meet the ever-increasing demands of an advancing civilization. As human life becomes more complex, the plastic years of childhood become more and more precious and the question of their education more critical, more decisive for the future both of the individual and of the race.

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[1] *Cf.* F. Tracy: "The language of childhood," *Am. Jour. Psych.*, 1893, VI, p. 126.

[2] *Cf.* E. R. Shaw: "A comparative study on children's interests," Child Study Mo., 1896, II, pp. 152-167.

The present admittedly unsatisfactory state of education is also partly due to the teacher's lack of enthusiasm. A new enthusiasm is needed in teachers, which can only be given by an earnest study of the child as it is, actually and potentially, instead of the child as we would have it. Wisely to present culture material to the child and the youth, we must know their wants, we must fathom their instinctive tendencies and their natural capacities. The teacher intrudes himself too much upon the child; his art is too apparent. The true pedagogic method is not dictation but questioning and suggestion, with a view to throwing the child upon his own resources and developing the feeling of responsibility, self reliance and true pride out of his instinct of self assertion. The child does things best when he is at his ease; we should respect his naïveté, his spontaneity, his unconscious instinctive way of learning. Less system and more insight!

Again, this deplorable state of education is very largely due to our system of mass-teaching, which distinctly discourages true education and in most lines of study makes it all but impossible. The real difficulty after all is the financial one—school-taxes! It must be admitted that bad as is the education the people are getting, it is quite as good as they pay for, and to have a better they must pay far more. This is recognized in all other lines of business, but persistently ignored in the business of education, which must at all costs be made cheap! The number of children generally assigned to a teacher in our public schools is so great as to render individual study and training of the children exceedingly difficult. Nevertheless every true teacher will strive towards the attainment of this ideal. The child's all important instinct feelings of courage, pride, fear, anger, love and pity should be studied with a view to a full rounded development of them in worthy directions. And so the educator should begin by asking himself: In what instincts and instinct-feelings is this child strong? In what weak? What are his fears? Of what nature are the things that arouse his anger? and his sympathy? How great is his spontaneity? His power of self control? Which one or more of the four temperaments does he possess?[1] With what degree of impressionability or suggestibility is he endowed?[2] Is he predominantly emotional, intellectual or active?[2] Has he already contracted any bad habits?[3] Is he characteristically ambitious or lazy, confident or irresolute, careful or reckless, bold or timorous, yielding or contrary, frank or sly, sociable or shy, tender or rough? Of what nature are the things the child remembers best? What is the present state or content of the child's mind, his knowledge of things, of language, of number, etc.? That is to say, of what nature are his apperceptive organs? Is the child quick or slow-witted, alert or apathetic, attentive or scatter-brained, imaginative or matter-of-fact, inventive or rutty? Is he predominantly eye-, ear-, or motor-minded?[1] Is there a basis or explanation for his mental or moral qualities discernible in the physical condition or environment of the child?[2] What is the condition of each of his senses as compared with the normal?[3] Is he precocious, backward, unsymmetrical or otherwise exceptional in physical, mental and emotional development? Of what nature is his fatigue curve?[4] Is he well nourished or anæmic, cheerful or miserable, patient or irritable, quiet or restless,[1] stolid or nervous, choreic and uneasy? Making all due allowance for the age and the kaleidoscopic nature of the child, the answers to such questions will disclose the foundation upon which the educationist must build. Such an examination—made of course without the child suspecting it—cannot be too thorough, for it is essential as well for the proper physical and intellectual as for the emotional education of the child. The teacher should be a physiologist, and should have constantly in view the health of his pupils, his function being to prevent rather than to cure disease, for no education worth the name can be gained at the expense of health.

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[1] *Cf.* L. M. Maitland: "What children draw to please themselves," Inland Educator, 1895, I, 77-81. Children should be encouraged to illustrate by original drawings the stories they read or hear.

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[1] *Cf.* Wundt: Physiologische Psychologie, pp. 421-423.

[2] Bain contrasts the spontaneous activity of those of an "active temperament" with the activity of "sensitive and emotional natures," an activity that results "more from some stimulus or object than from an innate exuberance of action." "The Senses and the Intellect," 3d ed., 1886, p. 70. Ribot (Psychologie des Sentiments, 1896), from another point of view makes a subtle distinction between the "affective" and the intellectual type of mind. "There is," says Ribot, "an affective type of mind which consists in the easy, complete and preponderant revival of affective impressions." The majority of people, however, he believes, have no free, *i. e.*, complete, emotional memory, in which the intellectual element is only a means of revival and rapidly effaced. Donaldson (Growth of the Brain, p. 342) seeks to express these distinctions in the following rather crude neurological terms: "It is readily seen that a high degree of responsiveness among the central cells gives us the intellectual type of reaction. When the efferent portion is well organized, we have the anatomical conditions of the man of affairs or action, while exaggeration of the afferent or sensory component leads to a merely passive existence or to hysteria, according to circumstances." It is more probable that the true basis for all types of mind is found in the peculiar disposition of the central cells—of which we know next to nothing.

[3] S. E. Wiltse makes a skillful use of suggestion in story telling to counteract bad habits. See "The Place of the story in early Education." Boston, 1892. Ginn & Co.

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[1] Consult on this matter F. Queyrat: "L' imagination et ses variétés chez l' enfant," Paris, 1893; W. H. Burnham: "Individual Differences in the Imagination of Children," *Ped. Sem.*, 1893, Vol. II, pp. 204-225; Donaldson: "The Growth of the Brain," pp. 341 and 342; and A. Fraser: "Visualization as a chief source of the psychology of Hobbes, Locke, Berkeley and Hume, *Am. Jour. Psy.*, 1891, IV, pp. 230-247.

[2] W. T. Porter ("Physical basis of precocity and dullness," Am. Phys. Ed. Rev. Vol. II, 1897, pp. 155-173) found that of children of the same age in the St. Louis schools, the dull were inferior, and the precocious superior to the average in weight, height, girth of chest and width of head, but the comparative growth of the three classes was the same. For much information along this line, useful to the teacher desirous of doing justice to his pupils, see F. Warner's works, and especially "The Study of Children and their School Training," 1897, Macmillan & Co., N.Y., and "A course of lectures on the growth and means of training of the mental faculty." Cambridge, at the Univ. Press, 1890. The latter contains lists of references to Dr. Warner's other contributions. F. Burk makes a résumé of the various studies of children's growth in height and weight in *Amer, Jour. Psych.* 1898, IX, pp. 253-326. The teacher should also have at his elbow, H. B. Dowkin's "Diseases of Childhood," London, 1893; Chas. Griffin & Co. For further references see the very complete "Bibliography of School Hygiene," by Wm. H. Burnham, Clark Univ., in Proc. Nat. Ed. Assoc. 1898. The question of psychological differences in children, due to sex, has received but little attention as yet. E. H. Bentley ("Sex differences that have been brought out by child study," North Western Monthly, Lincoln, Neb., 1897, Vol. VIII, pp. 257-261) has gathered together most of the meager information we have; but this matter does not attain prime importance till puberty.

[3] The educationist will find E. W. Bohannon's "Study of peculiar and exceptional children," suggestive in this connection: *Ped. Sem.* IV, 1896, pp. 3-60. For some excellent advice as to the study and treatment of neurotic children, see an article by J. Royce on "Mental defect and disorder from the teacher's point of view," Ed. Rev., N. Y., 1893, Vol. VI, especially pp. 451, *et seq.*

[4] *Cf.* E. Kräpelin: "zur Hygiene der arbeit," 1896: "Children are incomparably more fatiguable than adults, but there exist among them extraordinarily great differences, which are the more liable to be overlooked since great fatiguability is usually associated with great capacity for improving one's work by practice." In his treatise "uber geistige Arbeit, 1897, Kräpelin strongly condemns the present long

The young child is not reflective; he does not naturally make the conscious distinction between right and wrong, therefore he is not moral—nor is he immoral. But he does instinctively many things that are right as well as many things that are wrong from our standpoint; he is kind and sympathetic, but also greedy and cruel; therefore he is instinctively good, but also instinctively bad. In fact not only our terms 'moral' and 'immoral' but also 'selfish' and 'altruistic,' 'cruel' and 'sympathetic' and the like are terms whose meaning has shaped itself from the adult standpoint and largely from a consideration of adult conduct; they are terms of adult ethics and not applicable to childhood without great reservations. The child passes through a purely instinctive animal stage. His conscience is made up of instinctive feelings, not reflective knowledge. The great pedagogic problem of to-day is: How shall we bring the child safe and sound through this stage without, on the one hand, lopping off those basal animal instincts that often express themselves in ugly forms and getting as a product an atrophied creature lacking the fire and color of youth; and, on the other hand, without risking the growth and permanence of evil habits by an extreme and impracticable policy of *laisser faire?* Rousseau, entirely ignoring man's social instincts, fondly believed that in a "state of nature" freed from contact with man the child would grow up a perfectly symmetrical being. The accounts we have of feral children[2] are calculated to quench such false optimism.

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hours of school and infrequent recesses and believes that, under present conditions, inattention is the pupil's only safeguard and consequently tedious teachers are a real necessity." The true remedy, however, lies rather in reforming education than in shortening the time devoted to it, always excepting the "home-work," which should be abolished at least from the primary and grammar schools.

[1] *Cf.* H. S. Curtis on "Inhibition," *Ped. Sem.*, 1898, VI, pp. 97-100.

[2] *Cf.* E. B. Taylor: "Wild Men and Beast Children." Anthrop. Rev., 1863, I, pp. 23–30; and A. Rauber: "Homo sapiens ferus oder die Zustände der Verwilderten in ihrer Bedeutung für Wissenschaft, Politik und Schule. Biologische Untersuchung." Zweite Auflage, Leipzig, 1888.

On the other hand the pessimistic belief in total depravity and the necessity of making the child over again from the beginning is equally unfounded; the great rebirth comes naturally at adolescence. Meanwhile the normal and healthy education of the child's sentiments from birth to puberty can only be ascertained by each educator for himself by reverent study of the child's nature with a view to securing to him the full pedagogic value of lower stages of growth and of bridging him over in a tactful and timely way to ever higher.[1] One thing comes out clearly from this study of the child's instincts, viz., that the child by nature is and must be predominantly self-seeking, demanding and receiving more than he gives, and hence any premature grafting of altruism upon him is liable to produce a sickly growth.[2]

Nevertheless, though not naturally altruistic or self-denying, the child is social, making friends readily with all creatures and even including in his catholic sympathies inanimate things, for imaginative childhood takes little account of the distinction between animate and inanimate. This, then, is a valuable clue and starting point for the educator—intercourse and friendship, not only in the home circle, but with other children, with animals, with the flowers and the moon and the clouds. The great phenomena of nature, whose beauty, majesty and mystery appeals so strongly to the child, are his first natural objects of worship. The child who is permitted and encouraged in awe and love of these as superior beings will have all the more perfect reverence for a purer God later on, as well as a keener scientific interest in the works of nature.[3]

The child's instincts are not due to environment, his habits are, in the main; the former are inherited, the latter are largely acquired as a result of education, using this word education in its broadest sense. And herein lies a great distinction between man and animals; for with animals habits are mainly innate and fixed, and this to an increasing extent as the animal scale is descended. But the great all-conditioning instincts and instinct-feelings are due, in animal and child alike, entirely to heredity and variation,—indeed one may say that psychically they *are* the animal and the child. Happy is the child who is richly endowed therewith. These instincts, then, which every child has, although in varying form and vigor, must be turned into worthy grooves. Not suppression but a generous control!

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[1] There is no more convenient means of applying at once the doctrines of catharsis and of recapitulation than in the selection of the child's reading.

[2] The natural time for emotional training and a training in ideals is the period of adolescence. *Cf.* W. H. Burnham: "The Study of Adolescence." *Ped. Sem.*, 1891, I, p. 194.

[3] *Cf.* G. S. Hall: "The moral and religious training of children and adolescents," *Ped. Sem.*, I. pp. 196-210; and Jean Paul Richter (Levana): "When what is mighty appears in nature, a storm, the starry firmament, death, then utter the word 'God' before the child."

Character is the habitual direction taken by the individual in response to his instincts. It is evident, therefore, that the formation of character is the end and aim of education. While enlightenment and reflection must and should come in good time if the youth shows taste and capacity for it, nevertheless the great aim to be kept ever in view is the forming of good habits of feeling and action rather than the habits of self-examination and ethical and philosophical reflection. To do right from instinct and habit, mechanically, if you like, and because one cannot do otherwise, is infinitely preferable to a reasoned morality. If it be borne in mind how suggestible the child is, how strong, how omnipresent his imitative instincts, the gravity of the teacher's function will be appreciated. The strenuous endeavor of the teacher should ever be to help his pupils to be *themselves*.

LITERATURE.

Shakespeare, Voltaire e Alfieri e la tragedia di Cesare. Saggio di critica psicologica. LUIGI DE ROSA. Parte Prima. Camerino, Tipografia Savini. 1900. pp. xiv + 389.

Professor de Rosa's book is the first part of an interesting study in comparative literature from a psychological point of view. Among the topics discussed are: the age and tendency of Alfieri and Voltaire; Shakespeare's times and his marked objectivity; the Teutonic mind and the dramas of Shakespeare; the psychology of Shakespeare and classical psychology; Shakespeare's dramas and the classical drama; Shakespeare and Voltaire; Shakespeare and Alfieri; Voltaire and Alfieri. According to the author, Alfieri, as the initiator of revolutionary literature in Italy, and Voltaire, as the protagonist of rationalism in France, were both "*tendence*-poets," but the liberal movement in Voltaire's mind was for free thought and did not directly oppose itself to despotism, while Alfieri's liberalism was coincident with tyrannophobia. Voltaire was a "gentleman of the king," who looked upon royalty as a cure for the "canaille." Alfieri, it is true, did not love the demos as much as he hated the tyrant, but he was a great deal nearer the democratic ideal of to-day than was the great Frenchman. In Voltaire, too, the critic and the poet were more out of harmony with each other than was the case with Alfieri, who was always more coherent and less incongruous, and was able to "execute what Voltaire only dreamed about." In their tendencies towards simplicity, their desire to make an effect, and their didactic penchant, these two men of letters resembled each other, but with not able individual differences. Neither by art nor by their genius do Voltaire and Alfieri "belong to the family of Shakespeare," but the latter is closer to him than the former. Shakespeare is no "*tendence*-poet," for he is, as Coleridge said, "hundred-sided, thousand-souled;" he is the "ocean-man." To use Professor de Rosa's words (p. 29): While Voltaire, and, even more markedly, Alfieri, always put a part of themselves into all the creations of their mind, Shakespeare is able to personify, one after the other, all the ideas and all the tendencies, to objectivize himself in all forms, and to make them all live, forgetting himself almost completely." In other words, Voltaire and Alfieri are manifest in all their creations; Shakespeare lies hidden behind his. The last has the fundamental characteristic of genius. Shakespeare is the ensoulment of the Teutonic mind with its concepts of art and of ethics; he represents the Teutonic as opposed to the classic mind, being preoccupied by the inward reality, the secret face of human facts as they present themselves before the conscience of man. What is within man belongs to Shakespeare more than to any other poet. Shakespeare's personages have an evolution such as none in the classical dramas ever have; they are individuals who live and move and have their being as men and women of flesh and blood, natural and not artificial. They have all the phases of human personality; they are governed and transformed continually in accordance with the supreme laws of environmental adaptation. The play of circumstances, the labor of the individual are both made genial by his art. The text of Shakespeare is nature's own manuscript. He is the priest of her inner shrine. For Voltaire Shakespeare was always somewhat of a savage, while Alfieri feared that his touch would deprive him of all originality. The volume contains also many valuable data concerning the inter-influence of England, France, and Italy, especially with respect to the fame and appreciation of these three great men.

ALEX. F. CHAMBERLAIN.

Antropologia pedagogica. C. MELZI. Arona, Tipografia economica. 1899. pp. vii + 251.

This little volume, to which Prof. G. Sergi furnishes a brief introduction, is written by one of the chief movers in the agitation for school reform in Italy, upon the lines of "child study." After introductory sections on the scientific view of education, the relation of anthropology to pedagogy, the value of anthropometric researches in general, etc., comes an account of the Anthropometric Laboratory at Arona, the first institution of the kind to be installed in any Italian elementary school (pp. 27–117), then sections on Anthropometry and its Technique (pp. 119–188), Education of the Sexes (pp. 189–219), and Brain-Fatigue (pp. 221–246). Prof. Melzi is a teacher in the schools of Arona (previously he had been assistant in the Royal Deaf-Mute Institute at Milan), was trained under Sergi, and the installation of his "child study" laboratory on Oct. 20, 1897, was an event in the history of Italian education. The observations taken are physiological (anthropometric measurements, examination of sense-organs, physical constitution and state of health), and psychological (intellectual, affective and moral phenomena, temperament), besides data concerning parentage, family, etc. The schedule, which has been drawn up after consultation of all similar documents in use in Italy, is given in full at pages 60–68. The author also gives a list of subjects for investigation in the laboratory and school (pp. 109–114), numbering some 37 and ranging from the "sense of order" to "the effects of nasal obstruction on intelligence." The anthropometric data of the author himself, given in various brief tables, confirm the general results of previous investigations: the precocity of stature in girls, the more normal and more regular growth of the well-to-do as compared with the poor (Melzi found that the urban well-to-do were not so tall as the rural well-to-do, while the rural poor were taller than the urban poor), weight, vital capacity, thoracic circumference, muscular strength, measurements of head, tactile sensibility, etc.

Among the things advocated by the author in the way of school reform are the the following: A change in the nature of manual labor and pedantic acrobatic gymnastics such as will bring them into line with real educative processes without decreasing their pedagogical value; out-of-doors exercises, walking, swimming, skating, etc., are to be preferred to in-door gymnastic work,—gymnastics at the desk or in the school-room are bad in principle and disastrous to health; the shifting of the emphasis in the education of woman to the scientific side instead of the too exclusively literary training hitherto advocated and adopted so widely,—the *plus* of science will round out woman's character to the full; the scientific organization of the schools upon an evolutionary basis in harmony with the highest and best modern ideals. Prof. Melzi's book is a characteristic product of "newest Italy."

ALEX. F. CHAMBERLAIN.

Convocation Address, University of Toronto, October 1st, 1900. By the President, JAMES LOUDON, LL. D., Toronto. The Publisher's Syndicate, Limited, 1900. pp. 12.

The subject of this noteworthy address is "How shall the Youth of our land obtain a Liberal Education without Unnecessary Waste of Time and Effort?" Like Prof. Münsterberg, President Loudon asks "Why do our young men lag years behind the young men of Germany in attainment?" After a severe and just criticism of the methods in vogue in High Schools Education and during the preparation of young men for the College and University, using Germany to measure by, President Loudon concludes that "if the advocates of a three years' course [for B. A.] can secure the necessary modifications in what precedes, a proper proportion in the preparatory subjects, and the introduction of language study say two years earlier than at present, I see no reason why the Arts course might not be rearranged and sputened by a year, without impairing the standard." This address adds another strong note to the demand for reform in secondary and University education.

ALEX. F. CHAMBERLAIN.

The Child: A Study in the Evolution of Man. By ALEXANDER FRANCIS CHAMBERLAIN, M. A., PH. D., Lecturer on Anthropology in Clark University, Worcester, Mass. *Contemporary Science Series.* Walter Scott, London; Charles Scribner's Sons, N. Y., 1900. pp. xii+498.

This book, as the author says in the preface, is "neither a treatise on embryology, nor an essay in anatomy or physiological psychology," but is "a study of the child in the light of the literature of evolution, an attempt to record and, if possible, interpret some of the most interesting and important phenomena of human beginnings in the individual and in the race."

The plan and scope of treatment is suggested by the titles of the different chapters. They are as follows:

I. The Meaning of the Helplessness of Infancy; II. The Meaning of Youth and Play; III. The Resemblances of the Young; IV. The Periods of Childhood; V. The Language of Childhood; VI. The Arts of Childhood; VII. The Child as Revealer of the Past; VIII. The Child and the Savage; IX. The Child and the Criminal; X. The Child and Woman; XI. Summary and Conclusion.

The amount of matter contained in this work makes it a hand-book for the student of child anthropology; and it is also a contribution to education and to genetic psychology that no teacher or psychologist can afford to miss. Its five hundred compact pages present an astonishingly near approximation to the total contents of the nearly seven hundred works mentioned in the Bibliography, so far as they relate to the subject treated. The author is a master in the art of labelling books, résuméing a writer's thought and selecting key words and epigrammatic phrases. In every chapter a great crowd of witnesses is summoned. To take an example at random, on one page (p. 142) Herbert Spencer, the philosopher, Dr. Lukens, the educator, Steinthal, the psychologist, Dr. Brinton, the anthropologist, Herder, the litterateur, and Archdeacon Hunter, all contribute their evidence. On the next page Dr. Brinton and Dr. Lukens are recalled, and Dr. Tracy, Mr. Sutherland and Miss Wolff add their testimony. On the third Professor Kirkpatrick, Dr. Trumbull, Father Morice, Professor Sully, and Dr. Brinton are the witnesses. But the facts are skillfully marshalled and the witnesses are made to give their testimony in clear and concise language. The verbose Frenchman is made to compress his testimony into a sentence; the scientific German is required to omit details and the essential points of his contribution stand out more impressively; the amateur observer of children states his facts and omits his sentimentality; the self-styled paidologist, stripped of his self-consciousness, comes with his real offering in his hands; while the scientist who has learned to write, and the writer who has expressed a scientific fact aptly are quoted verbatim, and each, from scientist to schoolboy, gives his testimony at the right time and in fitting sequence.

At the present stage of knowledge in child anthropology, the results consist largely of new problems and pregnant suggestions. Few definite conclusions are yet justified. Dr. Chamberlain's book is full of the former, but he has wisely refrained from much generalization. This paucity of theory is at once a merit and a defect of the book—a merit because of the inadequacy of the data at present, a defect because the opinions and suggestions of one who has studied such an enormous amount of material are very fruitful. But while the author has been chary of personal opinion, the few inferences he does venture are important. Among them are the following: The child is prophetic quite as much as atavistic. Each child is potentially a genius, and the genius is largely such because in him the childish elements persist. Woman is more generic than man, and the child more generic than woman. And in childhood is the stage where the evolutionary process occurs. The general position to which the writer is led is illustrated by one of the closing paragraphs of the book. "The child, in the helpless infancy of his first years, in his later activity of play, in his naïveté and genius, in his repetitions and recapitulations of the race's history, in his wonderful variety and manifoldness, in his atavisms and his prophecies, in his brutish and in his divine characteristics, is the evolutionary being of our species, he in whom the useless past tends to be suppressed and the beneficial future to be foretold. In a sense, he is all."

W. H. B.

Plan of Organization of the College Entrance Examination Board for the Middle States and Maryland and a Statement of Subjects in which Examinations are Proposed. pp. 38.

This important plan was adopted May 12, 1900, and represents the following universities:—Columbia, Cornell, Pennsylvania, Union, Colgate, New York, Rutgers, Vassar, Bryn Mawr, and Princeton. Under its provisions these institutions and any other college in the Middle States or Maryland with a freshman class of not fewer than fifty students, choose annually five members—one of whom must represent secondary schools—who shall formulate the ground to be covered by secondary fitting schools as tests of college admission in botany, chemistry, English, French, German, Greek, history, Latin, mathematics, physics, and zoölogy. This Board designates each year a college teacher as chief examiner with two assistants—one of whom must be a secondary school man—to prepare papers, appoint a staff of readers to inspect and rate all answer books and to distribute returns. All these officers are to be paid. Answer books are marked on the scale of 100, above 90 being excellent, 90–75 good, 75–60 fair, 60–50 poor, and below 50 very poor. Each candidate before examination is to pay $5. All books marked below 60 are to be kept for two years. The first pamphlet defines the ground covered for examination in the above subjects.

It is significant that the Johns Hopkins has kept aloof from this scheme, and still more so that it was not adopted and indeed met with no general favor by the New England Association. The objections to it are the general objections to uniformity, over organization, and official and mechanical perfection which smacks of French methods and tends toward those of China. With such an institution, it is plain that colleges themselves would be to some extent marked, for each would have to determine the per cents below which it would not receive students. All such plans are bad for fitting schools, and the teachers in them, because they allow no freedom and fail to recognize the partial sense in which a school or even a college is not a geographical location or even an institution, but a state of mind made up of environment tradition, and morale. The higher education becomes, the less monotony and system and the more freedom and individuality should come into play. Over organization closes the great open questions, loses sight of basal principles, has to make colossal assumptions, and is in general more akin to senescence and the over specialization of moribund tissues than to the plasticity of youth. There is another ideal very different from that of committees of ten, twelve, and fifteen, or the formulæ of the modern language or biological associations, viz., that of qualifying teachers and so placing them that their opinion as to the fitness of students to go on to college will be the best of all tests. Just in proportion as an institution becomes big and overgrown, so that the individual members are submerged, the greater becomes the necessity for this kind of mechanism, of which New York education, both State and city, is perhaps the most full blown type in this country. It still remains for this Middle States Board and its advocates to construct the 12,000 Chinese examination cells, which will be necessary for the crowning effectiveness of the scheme. On the other hand, just in proportion as institutions are small and can develop rather than repress individualities, they not only do not need but far transcend such schemes. Does any one seriously believe that the simple statement of an able English teacher like Professor Thurber, of the Boston Girls' High School, Professor Collar, of the Roxbury Latin School, or Dr. Everett at Quincy, that a boy or girl was fitted in his subject to enter college, would not far surpass in value all the tests that the mechanists with all their enchantments can devise or bring to bear? Probably after all, the saving quality of such a scheme is that it cannot be enforced.

Soziale Pädagogik auf erfahrungswissenschaftlicher Grundlage und mit Hilfe der induktiven Methode als universalistische oder Kultur-Pädagogik, von PAUL BERGEMANN. Theodor Hofmann, Gera, 1900. pp. 615.

This author agrees with Nietzsche that some time the race will have no other serious topic of thought than education; that everything is to be hoped for, but that teachers are the chief obstacles in the way of progress, and all depends upon whether they can themselves be trained and taught to educate themselves. First of all, the idea and possibility of education, its limitations, necessity, the duration of educational activity, its functions, and the impossibility of any pedagogy that is of general validity, are set forth.

The second part is devoted to the social bases of the educational doctrine, the inadequacy of the individualistic view, the social dependence of the individual life, the sphere of social life and its origin and development, culture as a product of common life and common property, the motives of common life and the goal of pedagogy, the structure and organization of the social soul; its general and special functions; and the means of social education.

The third part undertakes a theoretical construction of the doctrine of social education as a "Kultur" pedagogy. Here the writer treats of domestic and public education and their relation, the vanities of educational instruction, the subject and the objects of education, the mode of treating the different functions of education, culture and occasional instruction, practice, play, and discipline, the organization of public education, its inner structure, the critique of the formal stages of the Herbartians, choice of the material of instruction, criticism of the Herbartian doctrine of culture stages and concentration.

The fourth part is devoted to the protection of children and popular education, and treats of lucrative activities of children and their dangers—intellectually, morally, and physically—reading saloons and book clubs, popular lectures and reading courses, museums, æsthetic and social amusements, and finally ethical and religious culture.

This book should be welcomed as marking important new departures. It is indeed remarkable that a German writer on education should have so thoroughly emancipated himself from the arid and jejune formulæ of Herbart.

Principles of Religious Education. A course of lectures delivered under the auspices of the Sunday School Commission of the Diocese of New York with an introduction by the Right Rev. HENRY C. POTTER, LL. D. Longmans, Green & Co., London, 1900. pp. 292.

These lectures were given in the fall of 1899 in St. Bartholomew's Church, New York City. The topics are the following:—religious instruction and its relation to education, by Professor Nicholas Murray Butler; the educational work of the Christian Church, by Bishop Doane; religious instruction in England, France, Germany and the United States, by Professor Charles De Garmo; the content of religious instruction, by Dean Hodges; the Sunday School and its course of study, by Rev. Pascal Harrower; the preparation of the Sunday School teacher, by Dr. Walter L. Hervey; the religious content of the child mind, by President G. Stanley Hall; the use of biography in religious instruction, by Professor Frank M. McMurry; the use of geography in religious instruction, by Professor Charles F. Kent; the study of the Bible as literature, by Professor Richard G. Moulton.

Mädchenerziehung und Frauenberuf, von ALBERT MOLLBERG. Berlin, 1900. pp. 168.

The family is the paradise of the child and should go hand in hand with the school. Family education, however, is individual, many sided, and cultivates only noble interests. The house mother should take the right kinds of walks and very sedulously avoid wrong walks with her children, and should overcome any reluctance she may feel to wandering with them. The family must enlarge its boundaries; the man must make himself felt or youth will be made too tender. The second part condemns evening work for school children and tells us how to form a fit sphere of thought, how to reach religion, history, the vernacular language, rudimentary geography, nature, arithmetic, and foreign languages. The shady side of the school is seen in the one-sided education of women, who are to be mothers. Every woman should be a friend of nature for pedagogical reasons. There must be more attention given to physical culture; the eye, hand, ear, voice and lungs must be trained; the power of coherent speech developed; verbalism and learning by heart should be reduced to their lowest terms. The lower classes should give their time mainly to collecting direct impressions of things and not in winning ideas. There ought to be criticism and supervision as a kind of pedagogical police, and the lost equilibrium between instruction and guidance should be restored. There should be an individual book kept for each pupil and plenty of individual intercourse between each and the teacher. Occasional evenings should be devoted to the parents, and approval and punishment should be emphasized. Finally, as a kind of harvest, ideas should be transformed into action, and this stage of education most needs transforming. The writer would accomplish this in part by means of elaborate Christmas celebrations, associations to help the poor, days commemorative of events in German history, plenty of excursions, games, and school devotions.

Nature Study and the Child, by CHARLES B. SCOTT. D. C. Heath & Co., Boston, 1900. pp. 618.

The dandelion in botany and the rabbit in zoölogy are made the basis of an exhaustive study through the first ninety pages. Chapter (3) is entitled, what is nature study; (4) its aim to develop the individual child; (5) to adapt him to his environment; (6) its limitations to nature and man as the two centers of education; (7 and 8) principles that determine method (although here, the laws of the child's mind are merely the old-fashioned Herbartian dogmas of sense, apperception, interest, and imagination); (9 and 10) the order of study; (11) expressive work; (12) relations of nature study to reading and literature; (13) to geography and arithmetic: (14) selection and sequence; (15) a graded course. Part II, nearly one-half the book is devoted to detailed outlines of study for each month of the school year from September to June, both inclusive. It is a comprehensive and able work but shows little knowledge of the recent lines of study either in psychology or child study. That there is a better point of view and method for nature work imminent, which this author does not see, we have no doubt. It is, nevertheless, one of the very best of the many books of its kind and standpoint that have lately appeared.

BOOK NOTES.

The Temple Primers. The Macmillan Co., New York, 1900. Price, 40 cents.

The Human Frame and the Laws of Health, by DRS. REBMANN and SEILER, Trans. by F. W. Keeble. pp. 148.

On the Exercise of Judgment in Literature, by W. BASIL WORSFOLD. pp. 98.

These seem to sustain the high character of the volumes we have previously noted in this series.

(1). *Homer to Theocritus*, by EDWARD CAPPS. pp. 329.
(2). *The Human Nature Club*, by EDWARD THORNDIKE. pp. 231.
(3). *Grecian History*, by JAMES RICHARD JOY. pp. 298.
(4). *The French Revolution*, by SHAILER MATHEWS. pp. 297. Chautauqua Press, New York, 1900.

Especially interesting in the above is Thorndike's ingenious attempt to present psychological rudiments in the popular form of dialogue in which very concrete practical cases are discussed with special reference to teaching and with notes by the editor at the close of many of the nineteen chapters summing up in more psychological terms their content.

Der höhere Lehrerstand in Preussen, seine Arbeit und sein Lohn, von HEINRICH SCHRÖDER. Lipsius u. Fischer, Kiel u. Leipzig, 1899. pp. 94.

This is an investigation upon the mortality of teachers in higher schools and a plea on this basis of the high mortality for a radical reconstruction of the pay roll in the gymnasia and real schools.

Report of a Visit to American Schools for the Deaf and Further Contributions to the Question of Methods, by J. HEIDSIEK. Trans. Geo. W. Veditz. Rochester, N. Y., 1900. pp. 59.

This writer gives an interesting presentation of his investigation here. He would have separate instruction in speech and language; articulation and lip reading through the whole course. Language work should be made on the manual alphabet, but should retire in the upper years more in favor of speech. Illustrative pantomime should be used in all stages, but the conventional sign language should not be tolerated.

Outline Studies in the History of Education, by ARVIN S. OLIN. Lawrence, Kansas, 1900. pp. 120.

These are the outgrowth of seven years' class room work in the University of Kansas. The outlines of each of the fifty-two lessons are given on one page and the references upon the opposite.

The Art of Study, by B. A. HINSDALE. American Book Co., New York, 1900. pp. 266. Price, $1.00.

The writer would shift the center of gravity in the school by making the pupil the center of the system and placing the teacher in his proper orbit. With this view he discusses recitation, attention, interest, will, thoroughness, methods, feelings, with a few references at the end of each of his twenty-two brief chapters.

Die deutsche Litteratur des Neunzehnten Jahrhunderts, von RICHARD M. MEYER. Georg Bondi, Berlin, 1900. pp. 960.

This is an unique and very valuable work by a writer who has carefully read most of the authors he discusses. Perhaps the best treatment is given to Nietzsche, Gerhart Hauptmann, Gottfried Keller and Suderman. Many of the chief works of the last quarter century are briefly digested and minor authors briefly characterized. Each of the ten chapters treats of those prominent in one decade. There are ten full page illustrations, Keller, evidently the author's favorite, occupying the frontispiece.

Victor Serenus. A Story of the Pauline Era, by HRNRY WOOD. Lee & Shepard, Boston, 1900. pp. 502.

This book is not on the conventional lines of the modern realistic novel and will not please those who think the didactical element has no place and that philosophy does not belong to a novel.

Elements of Rhetoric and English Composition, by G. R. CARPENTER. The Macmillan Co., New York, 1900. pp. 140. Price, 50 cents.

This is designed for high school courses and treats in separate chapters description, narration, exposition, argument, persuation, verse, and minor forms of composition. Under each well chosen selections are given with exercises and suggestions.

The Meaning of History, and Other Historical Pieces, by FREDERIC HARRISON. The Macmillan Co., New York, 1900. pp. 482. Price, $1.75.

This valuable and comprehensive treatise considers the use, connection and great books of history; historical schools; the thirteenth century; the Revolution of 1789; the ancient, mediæval, modern, and ideal city; Rome and Athens revisited; Constantinople and its problems very fully treated; Paris and London and their transformations.

Carlyle's Essay on Burns, with with the Cotter's Saturday Night and *Other Poems from Burns*. Edited by Willard C. Gore. pp. 186.
Ivanhoe, by SIR WALTER SCOTT. Edited by Alfred M. Hitchcock. pp. 480.
Macaulay's Essay on Warren Hastings. Edited by Margaret J. Frick. pp. 227. The Macmillan Co., New York, 1900. Price, 25 cents each.

These attractive booklets, like others of their series, are well furnished with introductory matter, notes, maps, etc.

Führer durch den Rechtschreib-Unterricht gegründet auf psychologische Versuche und angeschlossen an seine Entwicklungsgeschichte und eine Kritik des ersten Sach-und Sprachunterrichts, von W. A. LAY. Otto Nemnich, Karlsruhe, 1899. pp. 202.

Führer durch den ersten Rechenunterricht naturgemässes Lehrverfahren gegründet auf psychologische Versuche und angeschlossen an die Entwicklungsgeschichte des Rechenunterrichts, von W. A. LAY. Otto Nemnich, Karlsruhe, 1898. pp. 156.

Methodik des Naturgeschichte-Unterrichts und Kritik der Reformbestrebungen auf Grund der neueren Psychologie, von W. A. LAY. Otto Nemnich, Karlsruhe, 1900. pp. 123.

The history of orthography; the development of its methods; its psychology and finally the proper way of treating the subject is developed.

The history of number work forms the introductory chapter and gives a concise account of the reforms of Ryse, Basedow, Pestalozzi, Diesterweg, Grübe, Knilling, Tanck, and Beetz. The second part treats of the development and nature of number, groups, series, number pictures, the use of marks and fingers, etc., and the third part considers the methods of teaching number.

This admirable compend begins with Comenius and considers the psychology of the development of object lesson methods, of insight and of the Gemüth. The latter is devoted especially to the discussion of moral, æsthetic and religious interests. These three works are valuable contributions to pedagogy.

"*Festschrift,*" *in Honor of Abraham Jacobi, M. D., LL. D.* To Commemorate the Seventieth Anniversary of His Birth. May 6, 1900. The Knickerbocker Press, New York, 1900. pp. 496.

Fifty experts, mainly German and American, contribute articles on various children's diseases and their treatment, to celebrate the seventieth birthday of this distinguished expert. The articles seem to differ as much in value as in length.

NOTES AND NEWS.

Mr. Jinzo Naruse, sometime student of Clark University, and who has been for years devoting himself to the study of the education of girls, has at length secured the concession of a university to them in Japan, where the contributions have already reached 3,000 yen and the Mitzui family have given a splendid suburban site of seven acres near Tokio. Naruse has already been named president, and the institution is to open in April, 1901.

The San Franciscan Board of Education, C. W. Mark, President, adopted in July last a new course of study for four years, the preparation of which in studied and careful detail exceeds anything known to the writer in this country. It makes a volume of 311 pages, and extends from the primary to the high school, both inclusive.

Viola R. Olerich is advertised by some as the most advanced juvenile scholar on record. She has been exhibited in many American cities, and is described in the September Strand Magazine. She was born February 10, 1897, in Des Moines, and adopted by Professor Olerich at the age of eight months in order "to test in a practical way a new theory of education which we believe to be much superior to any system heretofore used." No attempt was made to select a particular child, but an average one in good health was sought. She was, however, somewhat pale and sickly, but now weighs over thirty pounds, and is a pretty blonde. She was early taught to amuse herself; allowed always to eat as much of everything as she desired at or between meals, a lunch counter always near; never spoken harshly to, and acquired everything she knows in the form of play. Books were toys. She knew her letters at seventeen months, and at two years and eleven months could read at sight, and with force almost anything. At three she could read English, German and French, and was taught by the sentence method. At twenty months she could read the digits and tell nine colors taught her by large figures on blocks hung up and given her when she called for them. Now she reads numbers to octillions; can draw at dictation almost any geometric figure. At one year and nine months she knew the flags of twenty-five nations; finds almost any prominent geographical place in Frye's Geography; at one year and ten months knew the portraits of over a hundred famous men and women, and a month later could name thirty-two kinds of seeds and twenty-five of leaves, and point out nearly all the bones in the body. Before she was one year and eleven months old school examiners found she knew 2,500 nouns of concrete things and 500 more abstract ones. At two years she knew twenty-two punctuation marks taught her on cards; at three spelled long lists of hard words. She uses a typewriter with considerable facility and alone, and is described as quite as bright in other matters as in feats of memory, which she sometimes exhibits in public.

The new *Indian Review*, which began last January, published at Madras, has interesting educational articles on the new university of research, Hindu philosophy, Studies in the Bengal schools, University examiners, etc.

Arthur L. Frothingham, of Princeton, New Jersey, one of the most profound ontologists in the country, and a bitter opponent of the monism and pantheism so prevalent in our day, has just issued an interesting thesis on the philosophy of entity more or less supplementary to his "monistic law of production by derivation," which will deeply interest all concerned with metaphysics.

Professor Pohlmann, the representatative of ancient history in the University of Erlangen, has just printed an interesting contribution to the history of the freedom of teaching, entitled *Socrates und sein Volk*, wherein individuality and the spirit of the masses are set forth in striking contrast, Socrates representing individuality in its conflict with popular opinion and his death being the tragedy of free thought.

Stopford A. Brooke's new hand-book of English Literature (Macmillan, 1899), starts from the period before the Norman Conquest, to which the first chapter is devoted, and ends with the death of Scott in 1832. It is a comprehensive and well proportioned primer, and has a convenient chronological table and index.

The insanity of youth and adolescence (Dementia Praecox), which has attracted so great attention of alienists in recent years, and seems to have been one of the chief factors in the recent transformation of Kraepelin's views, has been admirably summarized by Dr. E. Trömner, an expert in insanity, in a brief monograph with the above title, published in 1900 in Halle.

Professor Theodore Hough has given us a convenient and admirable summary of Swedish gymnastics (G. H. Ellis, Boston, 1899), which is separately printed. It is judicious and impartial.

D. C. Heath has undertaken to issue fortnightly a series of home and school classics in paper covers for ten cents each, "The Wonderful Chair," "Goody Two Shoes," "Hammerton's Chapters on Animals," "The Tempest," and Mrs. Ewing's "Jackanapes" are forefruits.

Dr. Smith[1] has presented an interesting and unique study in sociology based upon long experience among the Chinese, for whom he "has come to feel a profound respect for their numerous and admirable qualities." Behind this race lies an unexampled past and before it a wonderful future, to realize which, however, certain disabilities must be removed. The author describes first the institutions and usages of a public character, the village roads, ferry, wells, shops, theaters, schools, temples, markets, hunts, weddings, headsmen, crop watchers, loan societies, religious observances, etc.; while the second part is devoted to family life, and considers boys, men, girls, women, and the equilibrium of the Chinese family generally. A concluding chapter asks what Christianity can do for this country.

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[1] Village Life in China, by Arthur H. Smith, New York, 1899.

THE

PEDAGOGICAL SEMINARY.

Founded and Edited by G. STANLEY HALL.

VOL. VII. DECEMBER, 1900. No. 4.

EDITORIAL.

In the first article Superintendent McGhee studies 134 games of southern children to determine the effects of age and sex, analyzes them to show the elements of interest in them, and as many of them are local at least in name, briefly describes them. The effects of seasons and of race are apparent, and, as the author intimates, other lessons than those he takes the time to draw may be inferred from his data.

Dr. Croswell briefly describes Demolins's *École des Roches*, which is a French edition of Mr. Reddie's school at Abbotsholme, England. It is an unique experiment on a large scale, and is more at variance with the lycées than its English prototype is with Rugby, Eton, and the other great national schools across the channel. Its founder will be remembered for a book on Anglo-Saxon supremacy, which stirred France profoundly a few years ago.

Mr. Bell's study is of the time of life when the teacher's influence on pupils is greatest. From his curves it would appear that woman's influence culminates when the pupils are fourteen, and men teachers when the pupils are sixteen. The kind of influence is analyzed into moral, intellectual, personal interest, self-reliance, and social advantage. Dislike of teachers seems to culminate at seventeen, and not the least interesting of his results are the causes of aversion.

Librarian Louis N. Wilson continues his descriptive Bibliography of Child Study for 1899, and finds 441 publications that appeared within the year worth recording. This second supplement makes with his preceding bibliographies over 1,400 titles indispensable to every student in this department, in which it is indeed our only guide.

Dr. Chamberlain, appropriately at the close of the century, attempts to "indicate briefly for each country of Europe (exclusive of the British Isles and Turkey) the pregnant word or striking reform under whose influence the twentieth century will begin its course."

In the Reviews and Book Notes about sixty new publications are briefly or more fully characterized.

A STUDY IN THE PLAY LIFE OF SOME SOUTH CAROLINA CHILDREN.

By ZACH McGHEE, Assistant in State Department of Education,
Columbia, S. C.

This study, which as presented here is by no means complete or conclusive, is an attempt to throw light on the subject of children's interests in a way not wholly different from that of other statistical studies recently made in different parts of the country. The plan of asking a large number of children what plays they are most fond of playing is strikingly similar to that of Thomas R. Croswell as described in his excellent article in the *Pedagogical Seminary* of September, 1899, the main difference being that in the present case each child was furnished with a list of plays from which to select and the number of choices was limited to five. The returns in the two cases have been dealt with somewhat differently, but with the same general ends in view. The two investigations must have been going on at the same time, neither student being aware of the other's work, the article referred to appearing in the fall of 1899, while the bulk of the present work was done in the spring and in the autumn of 1898. The results in the two cases might, therefore, afford material for some interesting comparisons, especially also since the children studied in one case are in New England while in the other they are in the far South.

The plan of the present work embraces the presumption of correct answers by a large number of children to the question "What do you like to do?" or "What are you interested in in your plays?" To insure correctness and spontaneity in the replies, the question is put: "What plays do you like best to play?" A list was furnished each child, because it was believed after some experiments that the children, if asked to write down the names of the plays they were fond of playing, would have written down the first that came into their minds, generally those they had most recently played, not being able to call readily to mind plays that they had delighted in at other times and under different circumstances. The question is not asked "Why do you like to play these plays?" nor "What elements in these plays do you like?" because children do not know how to answer these questions. A child, or a grown person for that matter, is not accustomed to analyze his likes and dislikes. We learn what these likes and dislikes are and analyze them into their elements afterwards.

PLAN OF WORK.

The names of a large number of plays played by the children and young people in this section were collected, in various ways, from children, teachers, and others. From these the list given on pages 464–5 was selected and arranged. Great care was taken in the ordering of the plays in the list that those of a similar character, having in them the same elements, be separated as widely as possible so as to avoid any suggestion of grouping. This list was printed on slips with spaces for name of child, sex, age, and date.

These slips were sent out to a number of town superintendents, principals, and others in different sections of South Carolina, who had manifested an interest in the subject, and these took pains to collect the data through their teachers, according to the directions which accompanied the slips. These directions were as follows:

To the teacher.

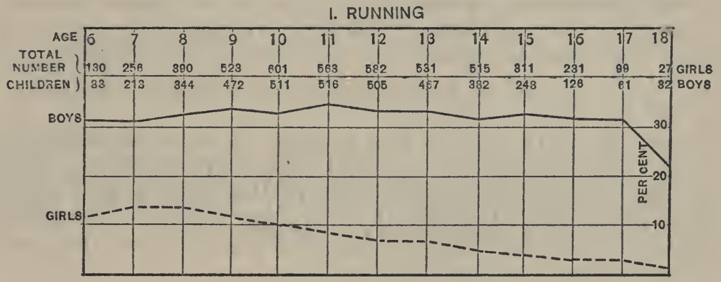
Give one of these slips to each child.
Direct that each child
1. Fill out the four spaces at the top;
2. Read carefully, noting each word;
3. Underscore the *five* plays he is most fond of playing.

Give no explanations of any of the plays, but insist that only plays that the children know and are fond of playing be underscored.
Allow no questions about how to play any of the games.
Make no suggestions.
Allow no communications.
Collect the papers as soon as they are finished.

This was done twice, once in May and once in December. Properly marked papers were returned from 4,566 children in May, and from 4,152 children in December. These form the basis of the study presented here. There were also returned about 4,000 others from white children in December, and about 3,000 from negro children, but the tabulation of these has not been completed.

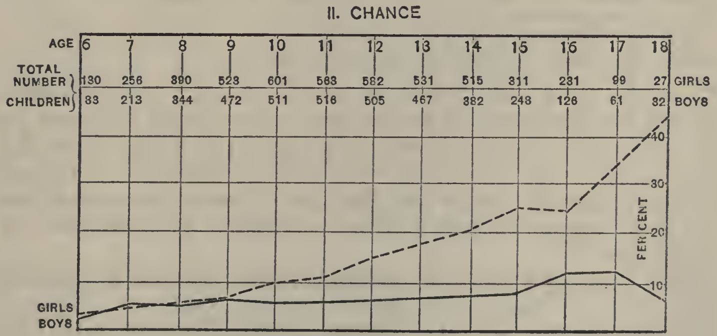
These returns have been tabulated and studied in various ways.

For the charts below, the lists, marked so as to represent the choices of the children, were tabulated according to age and sex. Then, the most careful analytical study of each play in the list having been made [see analysis of plays at the end], the plays were classified according to the elements of interest found in them. For instance, all plays into which the element imitation enters as a dominant element (*e. g.*, dolls) were put into one group; all those in which chance is a dominant element (*e. g.*, parchesi) were put into another; and so for the others. The number of choices of each of the plays was put opposite that play in the group and the sums taken. The per cent.—that the number of choices of plays in each particular group is of the total number of choices—was then found. These per cents. for five of the groups are given graphically in the charts below (I, II, III, IV, and V).



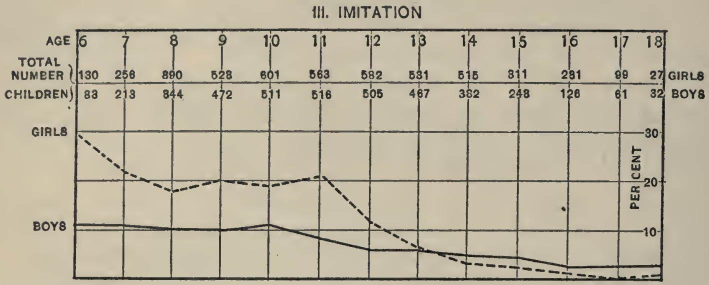
Group of Plays in which Running is the Dominant Element.

Fox and Hounds, Football, Dog on Wood, Chick-a-my chick-a-my crany-crow, Kitty Wants a Corner, Goosie-goosie-gander, Fox and Geese, Stooping Catcher, Tag, Catcher, King-a-mount, One Hole Cat.



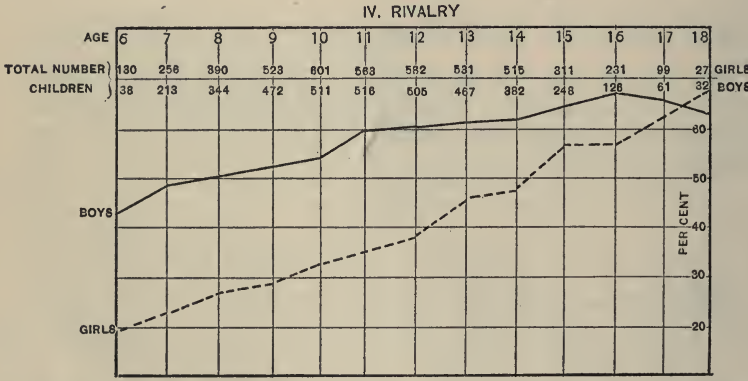
Group of Plays in which the Element Chance is Predominant.

Dominoes, Authors, Up Jinks, Lotto, Hull Gull, Jack in the Bush, Parchesi, Cards, Snap, William-my-tremble-toe, Consequences, Cross Questions and Crooked Answers, Gossip, Backgammon, Borrowed Property, Walk to Jerusalem.



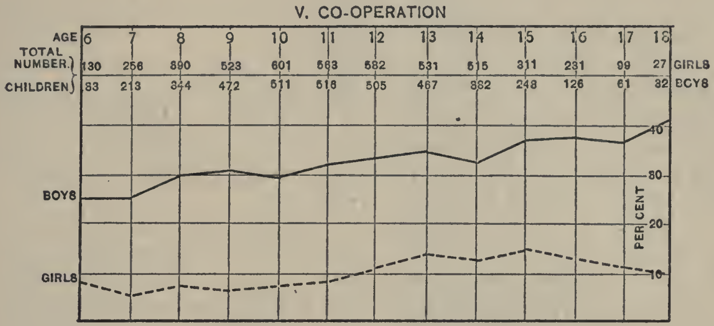
Group of Plays in which Imitation is the Dominant Element.

Pretty Maids' Country, Buffalo Bill, Dolls, Circus, Keeping House, Having Show, Punch and Judy, Policeman, Jail, Having Parade, Steamboat, Making Play House, Black Maria, Dumb Scrambo, Quaker Meeting, Teacher.



Group of Plays in which Rivalry plays the most Important Part, the Object of the Game being to "Beat" an Opponent.

One Hole Cat, Golf, Walking to Jerusalem, Shinney, Marbles, Picking Eggs, Pretty Maids' Country, Authors, Dominoes, Up Jinks, Lotto, Football, Croquet, Battle, Knucks, Hull Gull, Jack in the Bush, Crokinole, Tennis, Open Gates as High as the Sky, Base, Parchesi, Charades, Cards, Ten Pins, Bean Bags, Stealing Chips, Wrestling, Jack Straws, Baseball, Snap, Foot and a Half, Simon Says Wig Wag, Pig in the Parlor, Jack Stones, Hop Scotch, Checkers, Bull Pen, Clumps, Parlor Croquet, Philopœna, Roly Poly, Dumb Scrambo, Geography, Pillow Dex, Basket Ball, Green, Five Hundred, Tit Tat Taw, Mumble Peg, Backgammon, Chess, Tiddledy Winks.



Group of Plays in which Co-operation is Prominent.

Football, Base, Charades, Stealing Chips, Baseball, Geography, One Hole Cat, Up Jinks, Having Show, Battle, Having Parade, Dancing, Pillow Dex, Pig in the Pen, Bull in the Pen.

The value of these results depends, of course, very largely upon the grouping of the plays. A number of plays, especially the more popular ones, are so complex in their character that it is difficult to determine exactly what is the chief element. In fact, the reason some of the plays are so popular is because they have in them so many elements of interest. It is necessary, therefore, in the case of a few plays to consider several elements as of equal strength of interest, and such plays in the classification would fall in more than one group. However, in the charts above, no plays occur twice in the three groups, Imitation, Running, and Chance. The other two groups, Rivalry, and Co-operation, must necessarily include plays which are in the other groups. These two elements, rivalry, and co-operation are hardly to be compared with the others at all. Wherever rivalry enters into a play at all it is a "dominant" element, because the object of the game is to beat the opponent; but the activities, mental or physical, brought into play in doing this, determine the preference for any particular plays. As an illustration, in the games crokinole and parchesi there is the same element, rivalry. In each the object of the game is to beat an opponent: one person prefers to do this by excelling in skill; another prefers to excel in chance; another prefers to excel in hunting; and so on. With co-operation it is likewise: some prefer to co-operate in one way; some prefer to co-operate in another way.

Since the greater the number of children giving answers the more reliable and valuable the results of such calculations as these, the curves from about 8 or 9 years to 14 or 15 are more nearly accurate than the others. The sudden shoots at the end, from 17 to 18, may mean very little, or nothing at all, because of the small number of choices at 18.

The fact that the *Running* Chart (I) confirms common observation in that boys are fonder of this exercise than girls, and that this fondness on the part of boys does not seem to vary much with the ages here studied, is in some degree a corroboration of the other results. The Co-operation Chart (V) also confirms what we have ordinarily believed.

It would be very interesting to have these per cents. from an earlier age than six. Especially would it be interesting to know whether, by this method, the rivalry curves would start lower down at an earlier age and steadily rise as they do from six up; whether the imitation curves would be higher, as we all should expect, for the years before six; and would there be before six in imitation such a striking difference between the boys and the girls?

Besides the study of these plays according to groups, the tabulation according to individual plays affords an interesting study. Below is given the list and the total number of choices of each play.

NUMBER CHOOSING. BOYS 3,958, GIRLS 4,760.

	BOYS.	GIRLS.		BOYS.	GIRLS.
Book,	125	120	Croquet,	250	923
One Hole Cat,	95	51	Jump Rope,	102	1,029
Walk to Jerusalem,	58	208	Clap in and Clap out,	148	907
Shinney,	138	33	Battle,	387	59
Smiling Angel,	29	303	Swinging,	136	194
Marbles,	603	56	Punch and Judy,	218	122
Picking Eggs,	82	49	Stage Coach,	40	52
Pretty Maid's Country,	15	232	Knucks,	57	3
Authors,	163	516	Hull Gull,	67	57
Goosie Goosie Gander,	178	378	Pig in the Pen,	110	90
Buffalo Bill,	343	36	Keeping Store,	109	141
Dolls,	44	1,365	Introducing to King and Queen,	28	216
Dominoes,	133	240	Jack in the Bush,	62	45
Circus,	166	53	Kitty wants a Corner,	90	318
Keeping House,	47	595	Crokinole,	437	696
Up Jinks,	127	335	Policeman,	278	40
King-a-mount,	10	8	Tennis,	191	370
Here we go round the Rosy Bush,	42	204	Open the Gates as High as the Sky,	134	517
Fox and Geese,	562	357	I Spy,	167	212
Having Show,	81	59	Selling Forfeits,	9	59
Lotto,	179	353	Base,	170	157
Football,	2,216	132	Parchesi,	208	664
Spin the Plate,	58	239	Charades,	14	69
Swimming,	953	80			

	BOYS.	GIRLS.
Tag,	190	53
Cards,	260	265
Guessing Riddles,	61	211
Ten Pins,	116	51
Flying Kite,	232	35
Object Guessing,	4	14
Bean Bags,	22	90
Catcher,	47	36
Jail,	170	26
Stealing Chips,	145	318
Working Puzzles,	94	127
Having Parade,	31	11
Tiddledy Winks,	79	120
Hide-and-Seek,	233	492
Thimble,	31	147
Wrestling,	146	2
Drop Handkerchief,	187	778
Sheepie,	29	78
Jack Straws,	92	223
Baseball,	2,697	245
Dancing,	163	732
Club Fists,	47	42
Spinning Tops,	344	31
Snap,	40	66
Little Sallie Walker,	84	449
Blind Man's Buff,	109	366
Foot and a Half,	300	16
Simon Says Wigwag,	19	56
Pig in the Parlor,	63	106
Dog on Wood,	128	182
Jack Stones,	120	406
Hop Scotch,	33	166
William my Tremble-Toe,	59	94
Checkers,	398	384
Hide the Switch,	112	216
Steamboat,	147	13
Bull Pen,	100	8
I See a Ghost,	58	137
Clumps (Yes and No),	5	11
Antny Over,	59	38
Sting-a-miree,	25	10
Bull in the Pen,	163	25
Making Play-house,	14	154
Parlor Croquet,	17	84
Chick-a-my Chick-a-my Crany Crow,	86	256
Devil and Angel,	82	313
Proverbs,	10	86
Philopœna,	8	23
Roly Poly,	112	23
My Father Had a Rooster,	89	82
Consequences,	11	134
Black Maria,	105	17
Jake Grin at Me,	30	69
Cross Questions and Crooked Answers,	55	378
Gossip,	3	34
Golf,	59	29
Good Night,	58	209
Ring (on a String),	27	101
Dumb Scrambo,	2	6
Night Dodge,	10	4
Old Dame Wiggins is Dead,	44	148
Leap Frog,	370	37
Key,	14	57
Geography,	17	79
Stooping Catcher,	11	13
Pillow Dex,	61	114
Mother, May I Pick a Rose?	54	326
Table Rapping,	22	62
Chess,	35	30
Basket Ball	179	95
Twenty Questions,	7	13
Backgammon,	6	22
Rachel and Jacob,	13	47
Hat Stack,	7	3
Borrowed Property,	15	79
Fox and Hounds,	275	15
Quaker Meeting,	28	121
Green,	30	41
Five Hundred,	40	11
Teacher,	25	199
Tit Tat Taw,	53	83
Mumble Peg,	226,	145

One very striking thing we notice in glancing over these figures is that with the boys two or three plays far outreach all the others in popularity; while with the girls there are a large number of plays of medium popularity with none pre-eminently above the rest. 2,697 boys, or 68.9% of the boys, choose baseball, and 2,216, or 55.9%, football. There are no plays among the girls that can be compared for popularity with these two. The highest on the list with the girls is dolls, chosen by 1,365, or 28.7%. Next comes jump rope with 1,029 choices, 21.6%. On the girls' list there are twelve plays between 10 and 28%;

authors, dolls, keeping house, croquet, jump rope, clap in and clap out, crokinole, open gates, parchesi, hide-and-seek, drop handkerchief, and dancing. The third highest on the boys' list is swimming, 953, or 24%, less than half that of baseball or football; and except the two highest there are only five above ten per cent., and only two, swimming and marbles, above fifteen per cent. It is certain that the boys are much more decided in their preferences, and Chart VI below, which shows according to age the per cents. of the choices of the three most popular plays of the boys and the three most popular of the girls, indicates that this decided preference with the boys is well sustained all the way from six to eighteen, while the curves for the girls' plays vary very strikingly. Whether this enters into the fundamental difference between boys and girls, or is because there is no game on the list which appeals pre-eminently to girls, is an interesting question. The latter is probably true. There is no game which has in it the elements that appeal to girls as strongly as the numerous elements in baseball and football appeal to boys. There is no game which can at all be compared with these two games of boys. Basket ball is played extensively by college girls. This is comparatively a new game in this section, and this accounts partially for the very small number of choices, but an acquaintance with the character and instincts of girls, and with the elements which an analysis of basket ball will reveal, would bring us to the conclusion that basket ball is not likely to become pre-eminently popular with girls as baseball is with boys. The elements of play which the charts above, as well as a number of others made by the writer from these statistics, show as being preferred by girls are not those of a game like basket ball. Chance and imitation, for instance, which elements are very prominent in girls' play, are not in this game. The element co-operation is an exceedingly strong one in basket ball, and this curve [see Chart V] is low for girls. Croquet is the most popular game with the older girls, as seen by a reference to Chart VI below. The curve continuously rises, especially from 12 years of age up. This is a competitive play, and it is to be expected that as the curve of rivalry goes up with age the curve for this game would go up also, while the doll and jump rope curves come down. However, croquet has not in it the elements of a game likely to create any wide interest. It is too dull and lazy a game to appeal to anybody very strongly.

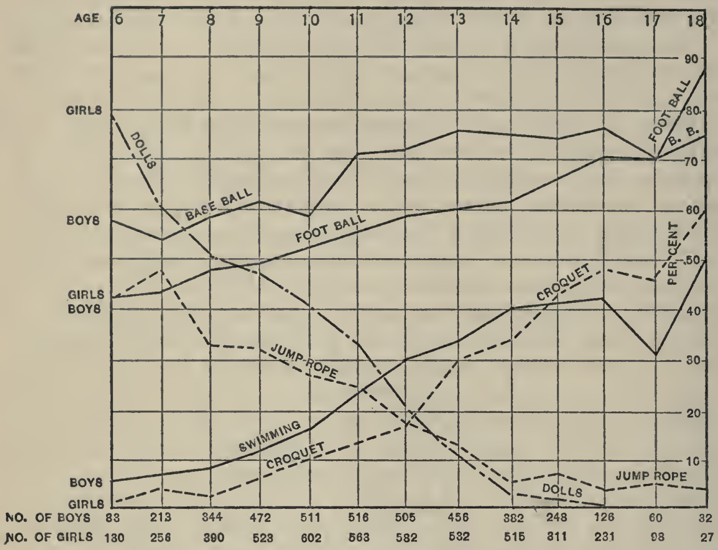
But there is another element in the most popular plays of boys which does not seem to appeal to girls with any considerable strength, and in this is an additional reason why basket ball, for instance, or croquet, will not have any pre-eminent popularity, for all ages at least. This is what we will call "organization." What is meant by an organized play is a game played by set rules. Football, checkers, steal chips, shinney, are organized plays; dolls, dancing, keeping house, flying kites, are unorganized plays. Co-operation is close kin to organization, and enters into all games which have "sides" or "partners." The two highest on the girls' list, dolls and jump rope, are plays in which the element organization is wanting. Of the twelve highest on the list, five are totally lacking in this element, while nearly all the others are games like hide-and-seek, for instance, which are but imperfectly organized, and in no play high on the girls' list is the element co-operation prominent. The two highest with the boys, on the other hand, those plays which far outreach all the others, are the most perfectly organized of all the plays on the list, are played by the strictest rules, and demand, moreover, the greatest amount of co-operation or "team work;" while scarcely any play on the list, with the exception of swimming, receives any considerable attention unless it is clearly an organized game. We notice, too, by reference to Chart VI, that the curves for baseball and football are high from the beginning, whereas croquet, the only organized game that is anywhere high on the girls' list, is very low until we reach the age of twelve. The unorganized plays, dolls and jump rope, are abnormally high until the age of twelve.

It would seem from this that the principle of organization is almost wholly lacking in the play of girls, especially between the ages six and twelve, while it is exceedingly prominent in that of boys. This does not necessarily argue an instinctive lacking in this respect on the part of girls; it is more reasonably explained by considering how little attention has been paid to the play of girls. In many quarters, in fact, until within recent years, girls have been taught that it is undignified and unladylike to play at all. In the case of boys,—inter-collegiate contests, inter-town contests, inter-state, and international contests in athletic games testify to the atttention given to their plays and the consequent stimulation to every boy to play. The principle of organization, the habit of organized effort, of studied and directed activity is developed through play, and if it is lacking in girls and in woman-kind in general, may it not be because the play of girls for many generations has been neglected?

VI. A Comparison of Favorite Plays.

The returns were taken once in the spring and once in the fall. The idea in doing this was to neutralize whatever effect any particular season of the year might have on the choices of the children. Having a list from which to choose doubtless has partially prevented the choosing of plays played only in the particular season in which the choices were made, but it is not to be expected that the choices are altogether the same in the two

VI. A COMPARISON OF FAVORITE PLAYS.



seasons. A number of charts were made according to season with an effort to determine to what extent the season affects the interests. In every case the curves for the two seasons were almost exactly alike, a fact which, by the way, tends to increase the value of the testimony of the charts, for the results, the per cents., from two sets of papers, were found to be almost identical.

In the case of individual plays, baseball was chosen in May by 71% of the boys, in December by 65%; football, May 52%, December 61%. These two have elements very much alike, so that this leads to an explanation of how, though different plays may be chosen, the elements are the same and the curves for the two seasons alike. With the boys, marbles stand: in May 19%, in December 11%; swimming, May 27%, December 21%. With the girls, dolls stand: in May 29%, in December 28%; jump rope, May 23%; December 20%; croquet, May 20%, December 19%. Only a few plays are given here as an illustration, and those are chosen which we should naturally expect to be affected by the season of the year.

The number and variety of comparisons that could be made with these tabulations, and the number of view-points on the subject that can be had, are almost without limit. The papers were taken according to schools and according to races. In one town there is a set of papers from a school which has in it about three hundred boys and no girls, and another set from a school in the same town which has about three hundred boys and about three hundred girls. It could be determined from these tabulations whether the same elements enter into the plays of the boys in the two schools, whether the presence of the girls in the school have any effect on the play life of the boys. The children of the two races could be compared. It would be interesting to note whether, though different plays be chosen by the children of different places, the plays have in them the same elements. These and many other ways of studying the returns are suggested; but lack of time and space forbid a more extended presentation.

Analysis of Plays.

Elements of Interest in Children's Plays.

Surprise,
Expectancy,
Hunting,
Unusual Activity,
Favoritism,
Imitation,
Deception,
Strategy,
Chance,
Pomp, or Display,
Singing,
Running,
Daring, Defiance,
Physical Strength,
Dexterity,
Agility,
Acquisitiveness,
Burlesque,
Imagination,
Guessing,
Set Words,
Resistance to Law,
Absurdity,
Natural Phenomenon,
Quickness of Perception,
Watchfulness,
Generalship,
Inflicting Pain,
Practical Joke,
Memory,
Constructiveness,
Co-operation,
Rivalry.

NOTE. The plays are given in the order in which they occur in the list used.

Book. One holds out the hands, palms down. Another attempts to hit these hands with a book held in both hands. If the person with the book strikes quick enough to touch the hands before they can be jerked down, the person whose hands are struck must pay a forfeit. Chief elements: Surprise, Strategy, Quickness of Perception.

One Hole Cat. A game very similar to baseball, the chief difference being that there are two bases instead of four. Chief elements: Running, Rivalry, Dexterity.

Walk to Jerusalem. Sometimes known as Chair Dance. Chairs are placed in a row facing alternately right and left, the number of chairs being one less than the number of persons playing. All march around the chairs to music. When the music stops, all try to sit down: one is left out and must stop playing. One chair is taken away and the music and the walk are resumed. This continues until there is left only one chair and the one who has succeeded in sitting in it has "walked to Jerusalem." Chief elements: Surprise, Suspense, Rivalry.

Shinney. Played in some sections on ice, but played by the boys in the South on ordinary turf. The ball is a hard rubber ball about the size of a golf ball. Each player has a shinney stick, bent at one end like the shepherd's staff. Each side tries to knock the ball to its goal. Chief elements: Running, Rivalry, Dexterity, Co-operation, Inflicting Pain.

Smiling Angel. A parlor game, the players in couples. The young men and the young women stand on opposite sides of a passage. Each young man is given a question to ask and each young woman, by a different person, is given an answer. Then each couple in turn promenades up and down the passage while the young man asks his question and the young woman gives her answer. If either smiles or laughs, he must pay a forfeit. Chief elements: Surprise, Absurdity, Favoritism (choosing partners).

Marbles. Several games are played with marbles, the bases of all the shooting of one marble at another. One of the chief points of interest in marbles is the making of a collection of marbles. Gambling with marbles is very extensively indulged in. Chief elements: Unusual Activity, Rivalry, Dexterity, Acquisitiveness.

Picking Eggs. Two persons have each an egg and hit the ends against each other. The one whose egg breaks loses his egg to the other. Chief elements: Unusual Activity, Acquisitiveness, Chance, Rivalry.

Pretty Maids' Country. Sides are chosen. The players on each side in turn retire and decide upon some object, generally some article of commerce, which they will represent by acting. They then go up to the other side and are asked, "Where do you come from?" The reply is, "We come from the pretty maids' country." "What do you bring?" They then act what they have brought until it is guessed by the other side, when the actors are chased back to their home. If any are caught, they go on the opposite side. Chief elements: Surprise, Imitation, Running, Imagination, Set Words, Co-operation, Rivalry.

Authors. Played with printed cards. A question and answer game. The one who answers the question asked takes the card. The largest number of cards thus won determines the winner. Chief elements: Chance, Rivalry, Acquisitiveness, Memory.

Goosie, Goosie, Gander. One is the "fox" at one base; all the others are "geese" at the other. After repeating certain words, the geese try to run from one base to the other without being caught by the fox. Chief elements: Running, Set Words, Agility, Rivalry.

Buffalo Bill. An imitation of Buffalo Bill and his wonderful deeds in the Wild West. Chief elements: Imitation, Display, Constructiveness.

Dolls. Includes all plays with images of people or animals. Chief elements: Imitation, Imagination, Constructiveness.

Dominoes. Several games are played with dominoes, but all have practically the same elements. Chief elements: Chance, Rivalry, Constructiveness.

Circus. An imitation of the various feats and features of the circus. Chief elements: Unusual Activity, Imitation, Display.

Keeping House. An imitation of housekeeping or of any phase of social life. Chief elements: Imitation, Imagination, Constructiveness.

Up Jinks. The two sides sit on opposite sides of a table. One side has a coin which they slip into one of their hands under the table. The other side calls "Up Jinks," when the hands are raised into the air. At "Down Jinks," the hands fall upon the table and the opposite side tries to guess under which hand the coin is. Chief elements: Surprise, Chance, Rivalry, Co-operation, Set Words.

King-a-Mount. Two get on some slight elevation. These are the catchers. Each of the others, in turn, runs the gauntlet, trying to avoid getting caught. Chief elements: Running, Daring, Agility.

Here We Go Round the Rosy Bush. The children join hands and walk around one in the middle, singing "Here we go round the rosy bush, etc." At the words "The last one stoops shall tell her beau," all stoop, the last one paying the penalty indicated. Chief elements: Set Words, Singing, Expectancy.

Fox and Geese. The "fox" tries to catch the "geese." Chief elements: Running, Agility.

Having Show. Giving performances of various kinds in imitation of dramas, circuses, etc. Chief elements: Imitation, Display, Burlesque, Constructiveness.

Lotto. Played with dice, chips, etc. Chief elements: Chance, Acquisitiveness, Rivalry.

Football. Usual rules. Chief elements: Rivalry, Agility, Dexterity, Running, Physical Strength, Daring, Co-operation.

Spin the Plate. Parlor Game. Each person has a number. One spins the plate and calls a number, say "Number 5." Number 5 must catch the plate before it stops spinning or pay a forfeit. Number 5 then spins the plate and calls another number, and so on. Chief elements: Surprise, Favoritism, Curious Natural Phenomenon, Dexterity.

Swimming. Chief elements: Unusual Activity, Agility.

Croquet. Usual rules. Chief elements: Dexterity, Rivalry.

Jump Rope. Chief elements: Dexterity, Unusual Activity, Agility.

Clap In and Clap Out. A parlor game. All young men leave the room. The young women choose each a young man for a partner, to sit in the chair behind which she stands. Then each young man comes in and chooses a seat. If he takes the wrong seat he is clapped out; if he takes the right seat, he is welcomed. After each young man has come in, the young women go out and the young men choose. Chief elements: Favoritism, Suspense, Chance.

Battle. Sides are chosen and arranged on the two sides of a straight line drawn on the ground. Then those on one side try to pull their opponents over the line. Those pulled over go on the opposite side. Another way of playing this game is to choose sides and arrange them on the two sides of the straight line (as in the first way). Each side draws a ring on the ground some distance from the straight line that divides the two sides. They call this the prison. Then members of the two sides try to run across the line to their opponent's prison safely (without being caught) and return to their own sides safely. If they are caught, either in running to the prison or back, they are called prisoners and are confined to the prisons until some one of their side runs over safely and frees them, bringing them back to their side. Chief elements: Daring, Physical Strength, Rivalry, Co-operation.

Swinging. In a swing. Chief elements: Unusual activity.

Punch and Judy. Burlesques on the drama, of various sorts. Chief elements: Imitation, Display, Burlesque.

Stage Coach. A parlor game. All seated save one. Each person is named some part of a stage coach outfit. The one standing tells a story about a stage coach. At the mention of any person's assumed name, that person must get up and turn around, or lose his seat to the one telling the story. At the mention of the word "stage coach" all change seats. The one telling the story enters into the scramble for a seat and all are seated save one, who begins another story about a stage coach. Chief elements: Surprise, Imitation, Imagination, Expectancy, Agility.

Knucks. Played with marbles. Chief elements: Unusual Activity, Rivalry, Dexterity, Acquisitiveness, Inflicting Pain.

Hull Gull. A gambling game. One person takes a number of small objects in the hand. The other guesses how many, and pays the difference between the number guessed and the number in the hand. Chief elements: Guessing, Rivalry, Acquisitiveness, Suspense, Set Words.

Pig in the Pen. One child is the "pig" and gets into a pen made by the other children joining hands around. The pig tries to escape under the hands. Chief elements: Physical Strength, Co-operation, Agility.

Keeping Store. Having goods for sale and selling them in imitation of a store. Chief elements: Imitation, Acquisitiveness.

Introducing to King and Queen. A trick game. A sham chair is fixed between the King and Queen. The guest sits here and falls. Chief elements: Deception, Inflicting Pain, Practical Joke.

Jack in the Bush. Same as Hull Gull. Chief elements: Suspense, Guessing, Acquisitiveness, Set Words, Rivalry.

Kitty Wants a Corner. Each child has a "corner," except the "kitty." The ones occupying corners exchange places, or play off from the corners. Kitty tries to get the corner and throw some one else out, who becomes the kitty. Chief elements: Surprise, Set Words, Running.

Crokinole. Usual rules. Chief elements: Rivalry, Dexterity, Unusual Activity.

Policemen. Imitation of the policemen in making arrests, etc. Chief elements: Imitation, Daring, Resistance to Law.

Tennis. Usual rules. Chief elements: Dexterity, Rivalry, Running, Co-operation, Watchfulness.

Open the Gates as High as the Sky. Two children assume names, generally of fruits, flowers, or the like. These join hands and open the gates, letting the children pass through, and shutting down their arms around each last one. The child encircled is asked to choose between the two names. He is sent to the rear of the one whose name he has chosen. The choosing is done in whispers. When all the children have chosen sides, the sides pull against each other. Chief elements: Chance, Physical Strength, Rivalry, Guessing, Set Words.

I Spy. One stands at a home or base and closes his eyes, while the others run and hide. Then the spyer tries to spy the others who try to get home without being spied. Chief elements: Surprise, Hunting, Running.

Selling Forfeits. Forfeits paid by different ones are singly held over one person's head who prescribes some sort of penance for the redemption of the forfeit without knowing who had paid the forfeit and will have to do the penance. Chief elements: Surprise, Chance, Expectancy, Imagination.

Base. Sides are chosen. Each side has a home or base. The players on each side try to catch those on the other away from home. The one last leaving home has the right to catch one on opposite side who has left home prior to him. The game is played with or without prisons. When there are prisons, those caught are put in prison until brought out by some of their side. When there is no prison those caught play on the side which catches them. Chief elements: Running, Agility, Deception, Rivalry, Co-operation, Daring.

Parchesi. Played with dice and disks on a board marked with spaces. The disks advance around the board according to numbers thrown with the dice. Chief elements: Chance, Rivalry, Generalship.

Charades. Same as Dumb Scrambo. Word acting. Sides are chosen and each side vies with the other in skill and histrionic talent. One side guesses the word the other side acts. Chief elements: Imitation, Strategy, Display, Rivalry, Constructiveness, Co-operation.

Tag. One hits another, "gets his tag," and then runs to avoid being hit in return. The last one to hit has the other's tag. Chief elements: Running, Agility, Rivalry.

Cards. Numerous games with cards, all with Chance and Generalship as the main elements.

Guessing Riddles. One gives a riddle. The others try to guess it. Chief elements: Guessing, Quickness of Perception.

Ten Pins. Usual rules. Chief elements: Dexterity, Rivalry, Unusual Activity.

Flying Kite. Chief element: Curious Phenomenon.

Object Guessing. Each one in turn selects some object in the room and gives the first letter or the first and last letters. The others try to guess what it is. Chief elements: Quickness of Perception, Guessing.

Bean Bags. Pitching bean bags at a hole from a fixed point. Chief elements: Unusual Activity, Rivalry, Dexterity.

Catcher. The "catcher" runs after the others. The one he catches must be the catcher. Chief elements: Running, Daring, Agility.

Jail. Imitation of imprisonment. One or more are arrested and imprisoned, the jailer keeping guard. Chief elements: Imitation, Physical Strength, Resistance to Law.

Stealing Chips. There are two sides arranged on opposite sides of a line. Each side has a number of chips placed in a ring back of the players. The object of the game is to steal the chips of the opposite side without getting caught. Chief elements: Strategy, Daring, Rivalry, Agility, Co-operation, Quickness of Perception.

Working Puzzles. Chief elements: Hunting, Curious Activity, Quickness of Perception, Generalship.

Having Parade. Imitation of street parade. Chief elements: Imitation, Pomp, Co-operation, Constructiveness.

Tiddledy Winks. Shooting small disks into a cup by pressing quickly on the edge of the disks with another disk. Chief elements: Unusual Activity, Dexterity, Rivalry.

Hide-and-Seek. One hides and another seeks. Chief elements: Hunting, Strategy, Surprise.

Thimble. One takes the thimble and conceals it in both hands, then passing his hands between the hands of all the others leaves it in one. Different ones try to guess into whose hands it was left. Chief elements: Hunting, Strategy, Guessing.

Wrestling. Trying to throw each other down. Chief elements: Physical Strength, Rivalry, Agility.

Drop Handkerchief. Players stand in a circle. One runs behind the others' backs and drops the handkerchief clandestinely behind some one. As soon as the one behind whom the handkerchief is dropped sees it he picks it up quickly and runs around with it, at first trying to throw it and hit the one who dropped it before this one gets to his place. He then takes his turn and runs around the ring and drops the handkerchief behind another. If one is hit with the handkerchief before getting to his place after dropping it, he must go into the middle of the ring until some one else has to take his place under the same circumstances. Chief elements: Surprise, Favoritism, Strategy, Running.

Sheepie. One goes in front, calling the "sheep" to follow him. After leading them on for a while he turns suddenly and tries to catch them. Those who are caught before getting into a ring join the catcher in trying to touch the others in the ring. Chief elements: Daring, Running, Agility.

Jack Straws. Picking up straws from a pile with a hook. One must be picked up at a time without touching or moving any other straws. Chief elements: Dexterity, Rivalry, Curious Activity.

Baseball. Usual rules. Chief elements: Unusual Activity, Dexterity, Running, Rivalry, Co-operation.

Dancing. Chief elements: Agility, Display, Co-operation, Favoritism.

Club Fists. A stack of fists is made, each player contributing one or more fists. Then each one is given the option of having his fist knocked off or taken off. Chief elements: Daring, Inflicting Pain, Absurdity.

Spinning Tops. Besides the ordinary spinning of the top, several organized games are played, with the chief elements: Unusual Activity, Daring, Rivalry, Curious Natural Phenomenon.

Snap. Played with cards or dominoes. Each turns the cards or dominoes dealt him until two players turn cards alike, when the first one that calls "Snap" takes the pile of the other. Chief elements: Surprise, Chance, Rivalry, Quickness of Perception.

Little Sallie Walker. One sits in the middle of a ring formed by the other players. These others join hands and walk around, singing. At a certain stage in the game the one in the middle dries her "weeping eyes" and "kisses the one she loves the best." Chief elements: Singing, Set Words, Favoritism.

Blind Man's Buff. One is blindfolded and tries to catch the others. Whoever is caught and recognized by the blind man must be blinded. Chief elements: Surprise, Hunting, Chance, Guessing.

Foot and a Half. One boy bends over and the others vault over him. After all have vaulted the boy moves a foot and a half further, when the vaulting is repeated. This continues until some boy fails to vault and has to "go down" and be vaulted over. Chief elements: Agility, Rivalry, Unusual Activity.

Simon Says Wig Wag. The leader calls out "Simon says thumbs up, Simon says thumbs down, Simon says Wig Wag," at which commands the others obey by putting their thumbs up or down or wigwagging them. If the leader should omit the words "Simon says" or any others in the commands, the players should make no move. Whoever moves when the command is wrong is dropped from the game. Chief elements: Surprise, Set Words, Rivalry, Strategy.

Pig in the Parlor. Couples promenade around, one in the middle who has no partner, singing "they kept the pig in the parlor." At certain words everybody changes partners, and the pig comes and joins in the scramble, leaving somebody else without a partner. The one left alone thus must be the "pig." Chief elements: Singing, Set Words, Rivalry, Favoritism, Chance.

Dog on Wood. The catcher can catch any one who is not on wood. The players dart from one piece of wood to another trying always to avoid the catcher. Chief elements: Running, Agility.

Jack Stones. Played with small marbles or Jack stones. Consists of various movements, pitching, catching, etc. Chief elements: Unusual Activity, Dexterity, Rivalry.

Hop Scotch. Played on a court laid off in rectangular spaces. A block or chip is pitched into the spaces in regular order and kicked out by the player hopping on one foot. Chief elements: Unusual Activity, Dexterity, Rivalry.

William my Trimble Toe. Each player contributes a finger, putting the end against the ends of all the others. Then one counts—"William my Trimble Toe, He's a good fisherman, etc.," winding up with, "One, two, three, out goes He." The one whose finger is last counted goes out and is brought back in one of several ways, being given the preference or a make believe preference. Chief elements: Chance, Set Words, Absurdity, Inflicting Pain.

Checkers. Usual rules. Chief elements: Generalship, Strategy, Rivalry.

Hide the Switch. One hides the switch. The others hunt it. Whoever finds it switches the others with it if he can catch them, then hides the switch in turn for the others. Chief elements: Surprise, Hunting, Running, Inflicting Pain.

Steamboat. An imitation of a steamboat or steamboat party; played in various ways. Chief elements: Imitation, Imagination, Constructiveness.

Bull Pen. Sides are chosen. One side goes into a large ring. The other side, which has the "joog" takes a ball, gives it to one without letting the other side know who has it. Those outside then walk around the ring, each making believe he has the ball, till the one who has it throws it at one inside the ring. If any one is hit he must throw the ball at one of the players outside the ring. If he misses he must sit down and retire from the game. If the one outside misses, he must retire. When all on a side are made to retire, the "joog" passes over. Chief elements: Surprise, Strategy, Guessing, Rivalry, Inflicting Pain.

I See a Ghost. A trick game. The children kneel in a row, putting the new player at the end of the row. They all see a ghost and point one arm. Then they all see a ghost and point the other arm. Suddenly the head one sees a ghost and falls against his neighbor and the whole row falls down, knocking down the new player or players at the lower end. Chief elements: Surprise, Strategy, Absurdity, Practical Joke.

Clumps. A representative from each of two sides decide upon an object. Then they go each to the opposite side and are questioned as to what the object is. The only answers admissible are "yes" and "no." The side that guesses the object first wins a point. Chief elements: Imagination, Guessing, Co-operation, Quickness of Perception, Generalship, Rivalry.

Antny Over. Played with a ball. Two sides on opposite sides of a house. A player on one side throws the ball over the house. If it is caught by one on the opposite side, the one who catches it runs around the house and tries to hit one of his opponents, all of whom run to get out of the way. If one is hit he changes sides or sits down. Chief elements: Surprise, Chance, Running, Agility, Inflicting Pain, Set Words.

Sting-a-miree. One takes the ball and says "sting-a-miree," another says "sting it to me," whereupon the holder of the ball proceeds to "sting" it to him. After the ball is thrown whoever gets it throws it at any fellow who says, "sting it to me." Chief elements: Running, Daring, Set Words, Inflicting Pain.

Bull in the Pen. Same as Pig in the Pen.

Making Play House. This includes all attempts to construct an imitation of a home, room or other place associated with habitation. Chief elements: Imitation, Construction.

Parlor Croquet. Played on a board or table, small balls being knocked with small mallets. Chief elements: Unusual Activity, Dexterity, Rivalry.

Chick-a-my chick-a-my Crany-Crow. The players, all except the witch, form a row grasping one another around the waist and march back and forth repeating: "Chick-a-my chick-a-my crany-crow, went to the well to wash her toe," etc. The old witch draws on the ground and answers the time "1 o'clock, 2 o'clock," etc. At 12 o'clock, the old witch gets up and tries to catch the one at the rear end of the line protected by the mother and all the rest of the children. Chief elements: Imitation, Set Words, Agility.

Devil and Angel. Devil and angel choose sides. Each side has a ring for a base. The devils choose a color and go to visit the angels. The angels try to guess the color, and when they guess it they run after the devils. Those caught go on the opposite side. Then the angels visit the devils after choosing a color. Chief elements: Guessing, Running, Agility.

Proverbs. One is sent out. A proverb is selected by the others. Then the one who is sent out returns and asks each a question. The answer must contain one word of the proverb, each word being taken in regular turn. The proverb is then to be guessed by the one who was sent out. Chief elements: Guessing, Quickness of Perception, Memory.

Philopœna. Two people join "philopœna." After that when one gives the other something and the other *takes* it without first crying "no philopœna," the first one cries "philopœna" and wins the forfeit. Chief elements: Surprise, Acquisitiveness, Rivalry, Watchfulness.

Roly Poly, or Roly Holy. A row of small holes are dug out in the ground, one for each player. The ball is rolled back and forth from one end to the other. If it rolls into a hole the owner of that hole throws it at one of the other players, who, if hit, throws it at another. The one who misses hitting the man he aims the ball at must put a "pig" into his *hole.* At the end of the game the player who has "pigs" in his hole must stand still and let each one of the other players throw at him as many times as he has pigs in his hole. Chief elements: Chance, Expectancy, Running, Inflicting Pain, Dexterity (throwing).

My Father had a Rooster. The first in a row says "my father had a rooster." The next repeats this to the next, and so on to the end, when the end one asks, "had it feathers?" The question is sent back to the other end of the row and is carried back again. Questions and answers about this rooster are sent up and down the row, each one repeating aloud. When the question is asked "how did it crow?" each one crows in answer. Chief elements: Set Words, Absurdity, Imitation.

Consequences. Each writes on a paper some adjective descriptive of a young man, folds it under and passes it to the next, who writes the name of a young man, folds it under and passes it on for the next to write something else, and so on. A number of stories are thus told by chance. At the end they are all read. Chief elements: Expectancy, Chance, Imagination, Absurdity.

Black Maria. An imitation of arrests made with the Black Maria. Chief elements: Imitation, Physical Strength, Resistance to Law.

Jake Grin at Me. Each one assumes some name, one being called "Jake." One stands, and with a whip of some kind whips one for some assumed offense. The one whipped lays the blame on another, who is beaten until he in turn blames some one else. The most common excuse for offense is "Jake grin at me," when Jake is beaten. Chief elements: Inflicting Pain, Absurdity, Defiance.

Cross Questions and Crooked Answers. Each one is secretly given a question to ask, and by an entirely different person is given also an answer. Then each asks his question of another, and receives the answer, which, unless by accident, bears no relation whatever to the question asked. Chief elements: Chance, Absurdity.

Gossip. One whispers something to his next neighbor, who whispers it to his next, and so on around the room. When it has passed all around it is told aloud, and is generally found to be a very different thing from what was originally whispered. Chief elements: Chance, Absurdity.

Golf. Usual rules. Chief elements: Dexterity, Rivalry.

Good Night. Same as Clap in and Clap out, except that instead of clapping out the person who takes the wrong chair or offers his arm to the wrong young lady, he is told "good night." Chief elements: Favoritism, Surprise, Guessing.

Ring (*on a String*). A ring is put on an endless string, and the players sit or stand around holding the string in their hands, concealing the ring. One in the middle tries to find it. Chief elements: Hunting, Guessing, Strategy.

Dumb Scrambo. Same as charades.

Night Dodge. The room is made totally dark, and a catcher tries to catch and recognize the others. Whoever is caught and recognized is made the catcher. Chief elements: Hunting, Guessing.

Old Dame Wiggins is Dead. One at the head says "Old Dame Wiggins is Dead." The next repeats this, and so on around the room. The one at the head then says "Old Dame Wiggins is Dead," and accompanies the words with a motion of the hands. This is repeated all around. The third time another motion of some part of the body, hand, arm, foot, or head goes around, and so on till everybody is in full motion. Chief elements: Set Words, Absurdity, Unusual Activity.

Leap Frog. One stoops and each of the others in turn vaults over him. The first that vaults over stops in front and stoops also. Those behind vault over all in front. The first one that stooped starts as soon as the last has vaulted over him and vaults over those in front of him and so on. Chief elements: Unusual Activity, Running, Agility.

Key. One person takes a key and gives it to another, telling him secretly to give it to a third; for instance, the "one who has the roundest face." This is done and the person receiving the key is directed to give it to, say, "the one with the bluest eyes," and so on. At the end, the key is traced around and the reasons given, for the delectation of the party. Chief elements: Expectancy, Imagination, Absurdity.

Geography. Sides are chosen and a leader for each side selected. The leader on one side calls some geographical name beginning with "A" and immediately begins to count aloud, One, Two, Three, etc." The leader on the opposite side must call another geographical name beginning with "A" before his opponent has counted ten. This leader begins counting immediately upon calling the name, the other leader calling another name before ten is counted, and so on. The one who counts ten on any name before his opponent has called another name beginning with the same letter wins a point. The aids on the sides stand, or sit near their leaders and give them names to call out. Chief elements: Memory, Co-operation, Rivalry.

Stooping Catcher. The "catcher" tries to catch the others. No one can be caught if he stoops, though the number of "stoops" each one has is limited. Chief elements: Running, Daring, Agility.

Pillow Dex. Played with a very light rubber ball over a table (generally). The players on the two sides bat the ball back and forth. The last side that gets it over wins the point. Chief elements: Unusual Activity, Physical Skill, Co-operation, Rivalry.

Mother, May I Pick a Rose. One is "mother." Each child asks, "Mother, may I pick a rose?" She answers, "Yes, my daughter, if you do not tear your clothes." They go to pick the rose. Mother calls "come home," etc. The answer is, "Don't hear you." The mother finally goes after them with a switch. She gives each one she catches as many licks with the switch as she finds buttons on his clothes. The first one caught is mother next time. Chief elements: Set Words, Resistance to Law, Running, Inflicting Pain.

Table Rapping. Trying to communicate with the spirits of the departed by having a table to rap in answer to questions. All sit around the table with hands placed flat on table forming continuous circle. Chief elements: Curious Natural Phenomenon, Imagination.

Chess. Usual rules. Chief elements: Generalship, Strategy, Rivalry.

Basket Ball. Usual rules. Chief elements: Running, Dexterity, Co-operation, Rivalry.

Twenty Questions. One goes out of room. The others select some object. The one sent out returns and has twenty questions to find out the object, all questions being answered by "yes" or "no."' Chief elements: Hunting, Imagination, Guessing.

Backgammon. Usual rules. Chance, Generalship, Rivalry.

Rachel and Jacob. Jacob is blindfolded in the middle of a ring. He points to some one, he knows not whom. This one is "Rachel." She goes into the ring and Jacob tries to catch her. When caught and recognized she must be "Jacob." Chief elements: Chance, Guessing, Set Words, Agility.

Hat Stack. Each boy contributes his hat and the hats are stacked on the ground. The boys catch hands and form a ring around. They then pull each other about. The one who knocks over the hats is taken by the others and bumped. Chief elements: Unusual Activity, Chance, Physical Strength, Inflicting Pain.

Borrowed Property. Each one is secretly given a name of some piece of portable property. By another person each is told to carry some person in the room to another saying, "I come to return some borrowed property." Upon being asked what it is, he gives the name which had been given to him. Chief elements: Surprise, Chance, Absurdity.

Fox and Hounds. A "pack of hounds" chase a "fox." Chief elements: Hunting, Running.

Quaker Meeting. All sit perfectly quiet. The first one that breaks the silence is punished in some way. Chief elements: Imitation, Burlesque.

Green. Two persons "join green." Afterwards each must carry a piece of green shrubbery, generally a green leaf, somewhere on the person. The one who is caught without must pay the wager. Chief elements: Surprise, Watchfulness, Acquisitiveness, Rivalry.

Five Hundred. Played with a knife with blades open at right angles. Consists of resting one blade on the floor or table and turning it, trying to make the blades stick in the floor or table. The several positions in which the knife may fall determines the points in the game. Chief elements: Dexterity, Unusual Activity, Rivalry.

Teacher. An imitation of a lesson, with a teacher and pupils. Generally the rod figures prominently in the play. Chief elements: Imitation, Burlesque, Resistance to Law, Inflicting Pain.

Tit Tat Taw. Two persons play. A square is divided into nine spaces. Each player has a character, and each in turn puts his character into the various spaces, trying to put three in a row, and thus have "Tit Tat Taw." Chief elements: Generalship, Rivalry.

Mumble Peg. Played with a knife with blade wide open. Each player has turns at trying to stick the knife into the ground in different ways, and by different movements of the hands and different positions of the knife, all in a set order. The one who loses in the game "roots the peg" out of the ground. Chief elements: Unusual Activity, Dexterity.

L'ÉCOLE DES ROCHES, A SCHOOL OF THE TWENTIETH CENTURY.

By T. R. Croswell.

"Education ought to make our men fit to rely upon themselves in all emergencies, and quick to fall on their feet after all accidents." This definition of the aim of education is reached by Edmond Demolins, a French professor of sociology, after studying comparatively the forces which act to form men in France, Germany and England. In his book, *Anglo-Saxon Superiority: To what is it due?* a book which has gone through many editions in French, and has been translated into half a dozen foreign languages within the few years since its first appearance—he attempts to show the secret of England's marvellous power of expansion in commerce and in territory. His answer is "individual initiative."

Demolins believes that national character is moulded by the character of the national education. Consequently he compares the school and the homes in France and England. In France both tend to form "officials," mere subordinates. For at the end of the school course is the government examination. The preparation to pass this is "cram." The influence of the French home, too, is to destroy independence. Throughout the period of development the French child is coddled, his parents never ceasing to treat him as a child. Under their social code the father feels that he must provide for the future of his children, and accordingly he limits their number, and spends his life to amass a dowry for each. Led to depend on this for his start, the boy in turn is robbed of his independence. And since a position under the government offers the easiest way of securing social standing, the three essential and most independent of all callings, agriculture, industrial pursuits, and commerce, are no longer attractive to the average French man, and still less so to his wife. Of the men formed by such conditions Demolins says: "They do not attempt to do something for themselves because they are powerless to do so. Our French training, excellent for the formation of officials, is of no value in forming independent, resourceful men, able to cope with the difficulties of life. They are good for nothing but subordinate functions, the remuneration for which will be a fixed salary, gained without exertion and payable monthly. On entering a man sees in advance his whole life. At such an age he will be *sous-chef;* later he will be *chef de bureau;* and later still he will get his *retraite*. The only date he does not seem to know is that of his death.''

The English school, on the other hand, is much better adapted to form active, self-reliant men; particularly is this true of the English Public School. Much less emphasis is laid upon the absorption of a definite body of facts; more upon a knowledge of the practical social relations of life, and upon the formation of independent characters by direct personal contact of the boys with their teachers and fellow pupils. The English parents, too, instead of considering their children as inseparable parts of themselves and trying to shield them from every hardship, from the first treat them as independent beings. There is no pretension of providing for their future. They are taught that they will have to depend upon themselves; the most beneficial dowry that can be given, for as nothing else can it makes them self-reliant. As a result of such a training the young Englishman enters upon life with a keen relish for a contest; he chooses the independent calling, is especially attracted to the land, and in the competitive struggle of nations shows to the world his superiority.

Influenced by the interest shown by his fellow countrymen in the results of his study on *Anglo-Saxon Superiority* Demolins has published a second book in which he appeals to French fathers to work for the salvation of their children, *i. e.*, ''to introduce and propagate in France the type of schools of the twentieth century.'' This second book, *L' Education nouvelle*,[1] enforces this appeal by referring to personal letters from fathers inquiring whether schools of the character described in his earlier book as existing in England, may be found in France, and by contrasting the present education given in the *lycées* with ''the new education'' to be given in *l'École des Roches*.

This school, based on the plan of two English schools, was opened October 1, 1899. It is located on a country estate of about sixty acres, three miles from the station of Verneuil, and is distant two hours ride by rail west of Paris.

The equipment is most modern, including steam heating, electric lighting, and excellent telegraphic connections.

The tuition is $500 per year. The general plan that of a family school strictly limited in number.

''The school has for its aim,'' says its founder, ''to make as rapidly and as completely as possible men—morally, intellectually and physically developed. It will endeavor to develop love for work, the sentiment of responsibility, self-respect, self-mastery, and the habit of activity and endurance. It is an institution for modern and classical education, but following a new programme better adapted to the nature of the child and to the necessities of education." Its programme permits the pupil to prepare for the government examination at the close of the lycée, or to enter one of the higher schools, or to undertake at once some agricultural, colonizing, manufacturing, or commercial enterprise.

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[1] See also Abbotsholme, by Cecil Reddie. London, 1900, pp. xvi, 640. This contains also a translation of the German book Emlohstobba. These three books,—Abbotsholme, Emlohstobba (an anagram of Abbotsholme), and L'École des Roches—present the Abbotsholme type of school from three points of view.

What are the special features of this "new programme better adapted to the nature of the child and to the necessities of education?" To show these more clearly and the possibility of realizing them, Demolins has prepared the chart, which gives side by side the actual programme of the school of the classical type for the French boy between 11 and 16 years of age, and the programme for the boys of l'École des Roches.

At the first glance it is seen that no subject is to be omitted in the new education that was taught under the old, but much more is added. The objection is at once raised that this will not do as the children are overworked and suffering from fatigue already. But an answer is at hand: the additional work is of such a nature, and the methods in all subjects so natural, that the boys will work with pleasure and without fatigue, and can do with ease all that will be required.

The actual programme provides only for intellectual education, the new one is arranged so that all such work comes before 1 P. M., leaving the rest of the afternoon for practical outdoor work, and the evenings for social culture and recreation.

The special aim of the intellectual instruction of the first three years is to give "a body of knowledge which every man ought to possess whatever his calling may be;" and in the last three years, during which the boy pursues a special course in letters, science, agriculture and colonization, or manufacturing and commerce, the studies vary to meet the theoretical demands of each course.

The aim of the practical work of the afternoon "is to develop physical education, knowledge and interest in the industrial occupations, energy in the undertakings," and an exact appreciation of the completed work, so that later one can either do it himself, or direct another.

The evening programme has for its object "to redeem our melancholy and awkward collegians." In the official programme Latin and Greek occupy more time than all the other studies; in the new one they appear only in the last three years, and even then are confined to the classical course. In their place is an increase in nearly all the other subjects, and especially in

WEEKLY PROGRAMME—L'ÉCOLE DES ROCHES.

	GENERAL. First Three Years.			SPECIAL. Last Three Years.			
CLASS. A. M.	Sixième	Cinquième	Quatrième	Lettres 3e 2e 1e	Sciences 3e 2e 1e	Agriculture et Colonization[4] 3e 2e 1e	Industrial et Commerce[4] 3e 2e 1e
French	3	3	3[1]	5	2	2	2
English and German	8	8	6	2	2	2	4
Latin and Greek				10			
Geography	2	2	2[2]	2	1	3	3
History	2	2	2[2]	2	1	1	1
Mathematics	2	2	3	2	7	2	3
Geology		1	1		1	1	
Botany	1	1	1	1	1	1	1
Zoölogy	1	1	1		1	1	
Physics	1	1	1		2	1	2
Chemistry	1	1	1	1	2	2	2
Drawing	2	2	2	2	3	2	4
Agriculture & Colonization						7	2
Commercial Studies						2	4
PRACTICAL WORK Part of P. M.							
1. Gardening & Farming	6	6	7	As in general section, but only during the free time.	As in general section, but only during the free time.	More emphasis on practical side of work agriculture.	
2. Work on Wood and Iron	5	5	6				
3. Visits to farms and mills, collecting minerals, plants and animals, surveying, etc.	4	4	4				

CULTURE AND RECREATION.[3]	7.30–9.00 P. M. Except for boys of sexième who retire at 8.00.
Monday	Reading: Lives of truly great men, etc.
Tuesday	Recitation and (acting)
Wednesday	Wood carving, modelling, etc.
Thursday	Dancing
Friday	Concerts: Instrumental and vocal
Saturday	Conférences
Sunday	Instruction in morals

OFFICIAL[6] WEEKLY PROGRAMME—LYCÉE.

Age	11	12	13	14	15	16
CLASS.	Sixième	Cinquième	Quatrième	Traisième	Seconde	Rhétorique
French	3	3	2	2	3	4
English and German	1½	1½	1½	1½	1½	2½
Latin and Greek	10	10	11	10	10	8
Geography	1	1½	1	1	1	1
History	1½	1½	1½	1½	1½	1½
Mathematics			1½	3	1½	1½
Geology Botany		1½				
Zoölogy, arithmetic	1½					
Physics[7]						
Chemistry[7]						
Drawing	1½	1½	1½	1½	2	2

the natural sciences, and most of all in the modern languages. And yet at the end the pupil is to know more Latin and Greek, and more of the other subjects than under the present system. This result is to be reached by a more natural method of instruction.

After mentioning the meager result of the average school, particularly in the languages, Demolins writes a long chap-

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[1] From the beginning of *quatrième* the study of Latin and Greek literature, through translations is begun, in order to give the class some general ideas upon these.

[2] From the beginning of *quatrième* the history and geography of England and Germany are taught entirely in English and German, which increase by so much the time devoted to these two languages.

[3] The school receives a certain number of reviews and special journals,—literary, scientific and agricultural, chosen with care and placed at the disposal of the pupils during their free time.

[4] The pupils who are preparing for agriculture, colonization, manufacturing or business, will receive, in the school itself, the entire preparation necessary, either to undertake at once these callings, or to enter the most of those technical schools. Further, they can prolong a year or two their study at the school to complete their work in the theoretical and practical studies of their specialties.

[5] Sunday morning is devoted to religious instruction and duties.

[6] The following changes have been made: The time devoted to the living languages has been increased from ½ to 1½ hours according to the class; the time devoted to geography and history, according to the class, has been changed ½ hour more or less. Finally they devote to mathematiques 1½ hour more in *seconde*, and ½ hour more in rhétorique.

No changes, however, are made in French, the ancient languages or in the sciences.

[7] Physics and chemistry are taught only in *philosophie*.

ter on *How to Solve the Question of Latin.* He finds the answer in a little pamphlet entitled *Latin Learned in Three Years; Greek in Two Years.* The method given in this pamphlet is one that the author, M. Olivier Benoist, had used with the highest success with his own children, and then with his grandchildren. Of the present method of instruction Demolins says: "I knew they were stupid, but I did not know how one could replace them; I know, and see it clearly now."

Benoist introduces the principle of his method thus: "At three years a child understands his mother tongue, at four years he speaks it. In one year, or at most in two years an older child or an adult, sent to England or to Germany, understands and speaks the language of the country. How does it happen that after six or even eight years of hard study, the pupils from our colleges, who present themselves for the *baccalauréat*, are able only with difficulty, to translate twenty-five lines of Latin in two hours, with the aid of a lexicon, and only about a third of the candidates attain a passing mark?"

In the first case we have positive results, in the latter negative. Here is the method of the former: "When, at about two years, a child commences to pronounce certain phrases, that is to say, *to compose*, what an innumerable number of oral turns of expression it has already made! These its mother has caused it to make. Every time that she has shown it an object and that she has told it the name, she has caused it to make a version with the aid of a translation. Does one see the infant working very hard when its mother teaches it to speak, when its mother teaches it everything? There is a perpetual exchange of smiles between them." "But," adds Demolins, "there are no smiles exchanged between the master and the pupil. They seem to delight to heap up difficulties under the feet of the unfortunate scholar, in placing the study of grammar at the beginning of instruction in languages. By itself this study is dry enough for a reflecting mind; it is decidedly discouraging for children to learn (when they do learn it) this mass of rules of syntax and exceptions, of conjugations and of declensions by mere mechanical repetition and pure exercise of memory. The method followed for the explanation of the text again dulls the interest. They never have the children read entire works, but only certain passages, in a very slow manner, only a few lines a day, not a way of interesting them much in what the text contains, as all will agree."

This usual method of teaching the dead languages Benoist likens to that of a general who in order to prepare his soldiers to march should exercise them each day at the rate of three miles in ten hours, and to insure this style of marching compels them to take four steps to each paving block. In what condition, says Benoist, would you expect to find the limbs of the soldiers after six years of this practice? The assumption that such a method exercises the intellect and gives the most subtle culture will be looked upon by our descendants as one among the popular delusions of past ages. But this method does have its paralyzing effect on the children, continues Benoist. Unconscious for the most part of the causes of their suffering they complain to their parents that they are tired. And these commit the great mistake of considering their complaints of slight importance. Ennuié is in fact the worst of things; it leads to idleness, and every one knows what that produces.

Any illiterate mother will teach her child by her natural method more of a language in two years than the schools do in six or eight. The solution, then, is to adapt her method to the ancient languages. This solution is obtained by substituting for the words of the mother, the reading of continued text from the very first. The Latin or Greek text *with the translation* is placed in the hands of the pupil. "The translation gives instantly the meaning of each word, without compelling the pupil to make with his dictionary long searches, sometimes unfruitful, always tedious." A translation in the hands of pupils only gives them the means which the master is obliged to use for himself. Why is the way made easy and rapid for the one, and difficult and unendingly long for the other? In short, the only practical and rapid means of learning a language is to fix in memory as many words and phrases as possible. When the pupil shall have read and comprehended,—a thing which is easy with a translation,—twelve or fifteen volumes of Latin, he will know Latin. Thus the work of the pupil would consist in reading and comprehending one or more pages of Latin. The translation would then be taken away, and he would be questioned on the Latin text alone. You cannot require a pupil to comprehend a given passage following the existing usage, but you can require him to prepare, with the aid of a translation, a certain number of lines, or pages, in a way to render them later at sight.

The grammatical study of the language, as in the case of the maternal method, does not precede, but accompanies and explains the more essential part. The method is unique. The facts of grammar are introduced only as they are needed to explain the text, and thus most of them are to be absorbed unconsciously rather than memorized mechanically. To lessen, however, the drudgery of either studying or referring constantly to a grammar, the walls about him are to be covered with charts, self prepared or otherwise, showing all the declensions and conjugations and examples of the rules of syntax. Demolins, who has used this method with success upon his own child, suggests the use of a folding screen made of three cards, 35 by 65 centimeters, upon which can be placed all the declensions and conjugations; and thus the whole scheme may be set up on the table in front of the child while he works.

Theoretically Demolins bases his expectations of obtaining the results demanded on the three following reasons: "(1) Because the children will not work beyond their capacity, and, nevertheless, they will at all times make manifest and measurable progress; (2) because the child will take an interest in the study of Latin, reading entire works in place of fragments which give him only an acquaintance with these works; (3) finally, because the end we propose for him will not be too far distant since the study of Latin will last only three years." The practicability of this method has been tested through its successful use by M. Benoist on his children and grandchildren, by Demolins on his son, and by numerous others cited by him. This, then, is Demolins's solution of the question of Latin: (1) It is not necessary to take it at all unless one wishes to pursue the classical courses; (2) and, then, since under the new method one can "know Latin" in three years, whereas under the present method at the end of six or eight years the results are at best only negative, the choice of Latin may be delayed three years, and thus much valuable time saved, in which to acquire those subjects essential for every one, whatever his calling may be; and which "can be made easily accessible to the intelligence of children below fourteen." A summary of this knowledge is found in his picture of the boy of twelve or thirteen who has finished the three years of the general course. "He will now speak three living languages: French, English and German. He has devoted to geography and history more time than they do in the present education, following a method which shows better the relations of phenomena. He has a very extended and practical acquaintance with physics and chemistry, while in the *lycée* these subjects are completely ignored until the final year, which follows *rhêtorique*. He has in addition some ideas on gardening and farming; he has been initiated into work on wood and iron; he has developed physically by work in the open air and by the practice of varied exercises; finally, he has a mind open to art, to music, to the life of society, thanks to the occupations (planned) for the evenings. Under the influence of this varied education, the aptitudes latent in this child of twelve or thirteen have had a chance to show themselves in one way or another, since all his intellectual curiosity has been awakened, and he is thus in position to choose intelligently his future calling.

The question of Latin was treated at length both because of the great prominence it still holds in all classical schools, thus crowding out other subjects, and also because its methods shed some light upon those used in all language study. There is truth in Demolins's charge that the usual method of teaching ancient languages is deadening, and that the usual method of teaching the living languages is the same as that of teaching the dead ones. Hence he would have as little technical work done in the mother tongue, but advocates reading much in the best authors, believing that by this reading the usages of style, spelling and grammar will penetrate the child's mind. "It is necessary to learn living languages as one learns his mother tongue, *by speaking*. The grammar should be studied only later, and then only to the extent necessary." This is the principle underlying the method of teaching German and English, no grammar being taught for five or six months. But the following points in the application of this method are of interest: (1) Nothing but the language in question is used in the recitation; (2) the first lessons are conversations upon some simple subject; *e. g.*, "a small boy offers a chair to a lady;" here the boys act out the part, thus avoiding the necessity of translation, and getting the ability to think in the language; (3) later they write short pieces, *e. g.*, on "The Life of the School," "Life in the Country," etc.; (4) in the second year they write longer articles, *e. g.*, the description of a journey of two months, or the life history of some plant; (5) only in the higher classes are the idioms, grammar and literature studied; (6) where possible the teachers draw on the board to illustrate the words, and the pupils are often required to copy both words and pictures; (7) the geography and history of the country is studied in its own languge; (8) a foreign teacher is employed for the foreign language, even if this does sacrifice patriotism; (9) arrangements have been made with similar schools in England and Germany to receive the French pupils for three months, six months or a year. The last is the most unique feature of all.

As a professor of sociology he sees in geography and history the foundation of the "science of man and society." Geography should show how man is influenced by the physical conditions of the place where he now lives; history how he is influenced by previous conditions of the locality and of places where his ancestors have dwelt. Since sociology now, as philosophy in the past, embraces all the other sciences, the natural sciences are easily correlated by means of geography and history; for the sciences, too, influence the life of man. "It is indispensable, whatever the profession one embraces, to have some practical and theoretical notions upon these sciences," continues Demolins. The starting point is direct observation, which is made easy because the school is in the country, where the children can easily collect numerous specimens from the mineral, vegetable and animal kingdoms. Further, the life, habits, and external parts of the animal are studied before the internal organs and skeleton; the form and structure of plants before their classification, the names and appearance of the stars and planets before the laws of their movements. The afternoons are devoted to practical applications of the subject, studied more or less theoretically during the morning, and to play and other physical exercise. The practical exercises include (1) work on the farm and in the garden, (2) work on wood and on iron, (3) surveying, visiting farms and manufactories, making collections, etc. Football, cricket, tennis and bicycling are especially mentioned among the physical exercises.

The nature of the evening work does not lend itself very readily to the needs of a programme maker. Its purpose can suggest, but only in a general way, the means which may be employed to develop the social instincts. Much emphasis is placed upon the forming of social habits through contact with adult society, particularly that of women, whose influence is so often wanting in the boys educated in boarding schools. The general programme indicates that the first two evenings of the week are devoted to the culture derived from literature; Wednesday and Friday to art; Thursday evening is pre-eminently social; Saturday is for lectures. Sunday evening is more for formal moral and religious teaching. But, if in this feature, as in all the others, l'École des Roches follows the example of the two English schools, the social feature and music will form an important part of every evening.

The difference in the programme of the present *lycée* and of the *new school* is not more important than the difference in teachers. In the *lycée* are two kinds. One who conducts the lesson from behind his desk. He is often a specialist, in the narrow sense of having studied one subject to the exclusion of all others. And he has the defects of this specialist: (1) It is difficult for him in his subject to come down to the level of his pupils; (2) he cannot help them by his personal example, because, as a specialist, his points of contact with them are limited. The other teacher superintends the discipline of the boys, and his close watch over their actions destroys the kinds of sympathy which might exist, and thus beget in the boys the spirit of lying and deceit. The new education must have a new type of teacher. This type is found in some of these English schools. He is no specialist, or rather a specialist in many lines; not only must he be able to give the most efficient instruction in several different branches, but he must be a cultured Christian gentleman in his daily life. In short he must be a good specimen of the human species in its different manifestations; a leader in sports and social recreations as well as in the class-room.

These sports, too, are to be emphasized much as in England. The new teacher must live with his pupils, and in a way take the place of a father to the boy. Thus his methods become more natural and his instruction more practical. He can teach from life as well as from books.

The methods, too, are as different as the teachers. The boy of the *lycée* is one of a large class instructed together. He receives but little personal help during the class, and is left to work outside without guidance or help. As a result he is sure to acquire bad habits, of which dawdling over his tasks as a result of the repeated obstacles which he meets and is unable to solve, is perhaps the worst.

In the new school there will be only ten or fifteen in a class, and they will do all their work in the class, and under the helpful, correcting guidance of the teacher. They will learn to work.

Character rather than instruction will be the aim. Demolins shows the appreciative delight of the father when, instead of finding in the report from an English school that his boy had been "obedient," he read, "I think you will find your boy stronger in body, more independent in character, and more master of himself."

On the whole we expect great results from the "Ecole des Roches." It initiates a unique educational experiment on a large scale, for it purports to be the forerunner of others of its kind. Its aims are clear and definite. Its method carefully chosen to attain these ends. Its further development we shall watch with the greatest interest, for it embodies two problems of the utmost importance to the student of educational history. (1) Of what value is a comparative study of existing civilizations to the student of pedagogy? This school is the direct outcome of such a study. (2) Can the educational institutions of one people be successfully incorporated by another? *L'École des Roches*, modelled after *Abbotsholme*, attempts to introduce into France the modified and idealized form of the English public school; but *Abbotsholme* is eclectic, attempting to supplement chosen features of the ordinary English public schools, with a generous saturation of the educational principles associated with the name of Herbart. However, it is unfortunate that the study did not go further, and seek its own conclusions instead of accepting, as it does, the ready-made answer of two English private schools; for these are neither the old schools which have developed the Englishman as we know him, nor is it certain that they represent more fully than others the peculiar forces which form English character. It is true that *l'École des Roches* aims to introduce into France an entirely new school atmosphere. It is not impossible to imitate the form of an institution, but it is much more difficult to transfer that peculiar school spirit which is often its very essence.

Further, to me the plan of his school does not seem to give sufficient weight to the conditions of the natural development of the boy. In aiming to prepare the boy to be a man, it seems partially to overlook the fact that he is still a boy; too much of the adult is brought into the life of the child, and too little opportunity given for the free life of boyhood; the questions arise whether a programme which maps out all that the boy is to do from his rising at 7.00 A. M. to his retiring at 8.30 P. M., is the best means to develop "private initiative;" whether so much control over the social life, as is indicated by the evening programme, may not lead to a premature and unhealthy social development; whether after all the good which we must recognize in a high-priced family school of this character, the general tendencies of our age do not compel us to say that the "type of the schools of the twentieth century" will be more popular and more democratic in character.

Demolins's work is especially timely for American educators. No feature in our education is more definite and certain than the steady but slow centralization of authority. That this centralization has given us better schools, on the whole, is generally believed; that it is the only way to secure the best for the future, is the belief of many, particularly of those who see more beauty in an efficiently organized school system than they do in an efficient and normally formed human being. France has the type of a thoroughly centralized school system, and Demolins tells us that it forms, not "men," but only "officials." In America the question between individual freedom and general uniformity has already received much attention. President Eliot, of Harvard, has told us that the private schools of Massachusetts are less fettered than the public schools, and adapt themselves to reforms more promptly. In all our large cities the private schools, some of them poor enough, too, live and thrive under the very eaves of our public high schools. At the present time an acute question in Chicago is, "why are the boys dropping out of the high schools?" The answer is undoubtedly very complex, but the fact that so many leave only to enter some private institution, would seem to indicate that the latter possess something not found in the former.

Twice does Demolins repeat Lemaitre's characterization of the graduate of the French *lycée*, as a young fellow who knows neither Latin nor Greek; and yet has no better knowledge of the living languages, of geography or of the natural sciences; in short, as a monstrosity, a prodigy of nothingness. This sounds like some of the criticism of our high school and college graduates by those who scent a danger of over-education. If, as Demolins claims, Latin can be more effectively taught in three years than under our current methods in six or eight, little ground is left for those who advocate beginning Latin in the grades. And the barren results of our modern language teaching, particularly in our colleges, invite the American teacher to a careful consideration of its possibilities.

The emphasis laid upon the social side in this French programme may well make us ask whether our American public is not giving too little attention to this highly important phase of culture; while the school does not recognize it officially, and often hinders rather than promotes the development of the pupil's social instincts, the home is perhaps relying more than in the past on some outside agencies to supply this training.

By his clear conception of the typical school of the future Demolins has done the educational world a service. He has given us a definite ideal of the man whom the schools should form, and a very definite ideal of the school which is to produce this man. The ideal is incarnate in that all round Englishman who is conquering the world by the power of his "individual initiative;" who is fitted to rely upon himself in all emergencies, and quick to fall upon his feet after all accidents. We may question both his ideal man, and his ideal school, and yet be compelled to acknowledge that they are superior to existing institutions and their graduates.

A STUDY OF THE TEACHER'S INFLUENCE.

By Sanford Bell, Fellow in Clark University.

List I.

I. The Source, Nature and Value of the Material.

In 1896 the following questionnaire was given to the students in my psychology and pedagogy classes at The Northern Indiana Normal School at Valparaiso, Indiana:

TOPICAL QUESTIONNAIRE.

List I.

Recall all your past teachers and single out the one that did you most good:

1. In what way was he or she most helpful to you?
2. How old were you and how long were you under her care?
3. Was there ever any one thing which she said or did that particularly influenced you? If so, give details.
4. Did she affect your after life? If so, in what way.
5. Give a personal description of her, including both physical and mental traits.
6. Single out the one you *loved* most, and tell what made you love her.
7. Was she the same one that helped you most?

List II.

Single out the teacher you loved least:

1. Did you have any *positive dislike* or *hatred* for her? If so, what caused it?
2. Was there ever any one thing which she said or did which deeply affected you? If so, tell as exactly as you can what it was and how it affected you at the time.
3. How long did this effect last? If transient, what caused it to leave? If permanent, what has been its influence on your life?
4. How old were you, and how long were you under her charge?
5. Give your present age, sex and temperament—whether sanguine, phlegmatic, choleric or melancholy.

The enormous attendance at that school, the variety and maturity of the students, were conditions especially favorable to the collection of much and singularly valuable material. During the years 1896-98, more than 800 sets of answers to the two lists of questions were collected from the students in my own classes. In the following year 135 sets were furnished by my successor, Professor George W. Neet; 75 sets were furnished by Drs. W. L. Bryan and Ernest H. Lindley from the students in their ethics classes at the Indiana University; and 13 sets were furnished by Professor W. E. Ashcraft of the Chattanooga (Tenn.) Normal School. The students furnishing the 800 sets from my own classes were used to making careful observations and accurate reports. What explanations were thought to be necessary were carefully and clearly made, and all of the returns bear the stamp of care, accuracy and honesty. Substantially similar conditions prevailed in regard to the other sets. In all there were 1,050 sets of answers turned in. Out of this number there were 19 sets that were defective in the way of omissions, vagueness or indefiniteness, and therefore discarded, leaving 1,031 sets of answers that were worth using. Of these, 543 were from men and 488 from women. The men range in age from 17 to 43, the great majority being between 23 and 31. The women range in age from 16 to 37, the majority being past 21. There were 14 women who would not give their age. In the event that they had, the average would have been raised.

While most of these people were either experienced or prospective teachers, many were clerks, lawyers, mechanics, stenographers, bookkeepers, ministers, etc., etc.

The care with which the returns were collected, the maturity of those testifying, the fact that they were used to close application and accurate reporting, and the further fact that they represent several organized interests, all give the material an unusual value.

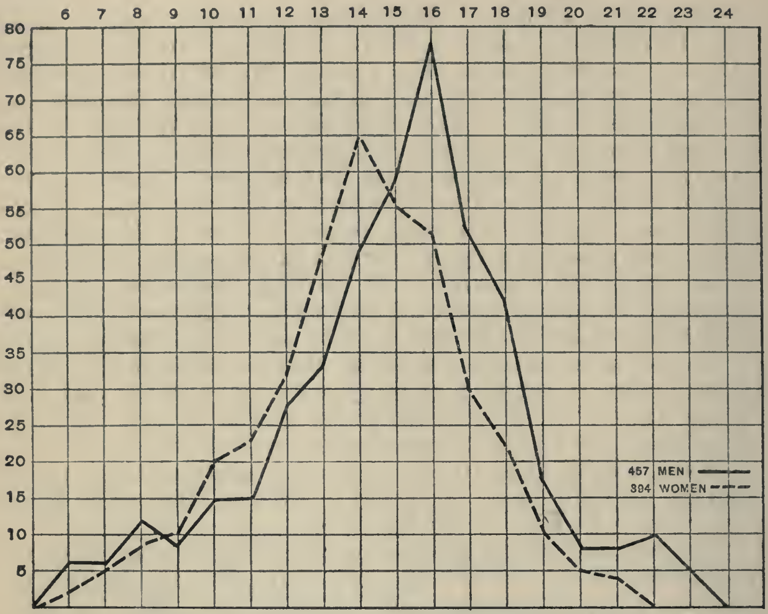
List I.

II. The Time in Life When the Greatest Good Came.

The general direction at the head of the first list of questions is: Recall all of your past teachers and single out the one who did you most good. The second question in the list is: How old were you and how long were you under her care? Of the 1,031 persons who answered the question, there were 851 who gave exact years within which the greatest good came to them. 457 of these were men and 394 were women. The following curves will indicate the relationship between the numbers testifying and the years in which the good came:

The 457 men testify as follows: 8 locate the good as coming at the age of 6; 7 locate it at the age of 7; 12 at the age of 8; and 8, 15, 16, 28, 34, 48, 58, 78, 52, 44, 18, 8, 8, 10 and 5 at the ages of 10 to 25 respectively. The 394 women testify as follows: 2 locate the good as coming at the age of 6; 5 locate it as coming at the age of 7; 9 at the age of 8; and 20, 24, 33, 50, 66, 55, 49, 31, 22, 10, 5 and 4 at the ages of 9 to 24 respectively.

It is to be noted that more than three-fourths of those testify-



CURVE, SHOWING AGE AT WHICH THE GOOD INFLUENCE CAME.

ing,—642 out of 851,—locate the good as coming from the age of 12 to 18, which would seem to mark this period out as one of relatively great susceptibility to influence for good. The curve then becomes an indicator of the relative degree of susceptibility to good and assumes pedagogical significance of great importance. Interpreted to mean this, it indicates that the period between 11 and 17 in girls, and that between 12 and 19 in boys are the periods *par excellence* during which influences for good should be brought to bear upon their lives. The curve indicates that the degree of susceptibility in girls begins to rise rapidly at 11 and reaches its maximum at 14, while in boys it begins a year later and reaches its maximum at 16 and goes down rather rapidly. This fact agrees with other significant differences between the sexes known to exist at this period in their life. The significance of this point will be discussed later.

It is mentioned above that 851 out of 1,031 gave exact years within which the good influence was received. The remaining 180 referred to the influence as coming, not in a given year but during a period extending through a number of years, *e. g.*, during the time from 13 to 16 years of age. Of these 180 there were 86 boys and 94 girls. A special curve for these special cases differed in no essential feature from the one above, and, therefore, does not deserve further mention. It might be of interest to know that the average length of the period was 2.3 years for boys and 3.71 years for girls. This special set of 180 seems to be from those who have a tendency to be more nearly conservative. If this be true the facts would indicate the further truth that the girls are more conservative than the boys.

After the above part of this study was finished 353 sets of answers were put in the waste basket through mistake, leaving only 698 sets as a basis for further study. Of this 698 sets, 360 were from men and 338 from women. (The papers that were lost had been gone over several times. And although they do not show in the following statistics, they influence the entire study.)

III. The Kind of Influence.

The first question in List I is: In what way was he or she most helpful to you? The influences indicated in the answers easily fall into two classes, viz.: *moral and intellectual.* But on account of the emphasis placed upon the *personal attitude* of the teacher toward the pupil, it has been thought best to treat this subject separately, as also has been true of the influence referred to as *self-reliance.* It is impossible to draw any sharp lines between these two separate classes and that of moral influences; in fact it would perhaps be more nearly true to treat them as kinds of moral influences and subordinate them to that as a more general head. However, this classification is intended rather to serve for convenience than to satisfy the demands of science. There will be, then, the following four classes of influences which we will discuss in their order: 1, *Moral Influences;* 2, *Intellectual Influences;* 3, *Personal Kindness*, *Interest*, *Encouragement*, *Sympathy*, *etc.;* and 4, *Self-Reliance.*

1. *Moral Influences.* Out of the 360 men testifying, there were 176 who characterized the good received as being moral; and out of the 338 women, 164 testified to this kind of influence. The following examples taken from the testimonies will serve to illustrate the nature of this influence:

M., 21. He was most helpful to me in that he aroused within me a greater desire to make something of myself. I was 16 years old at the time, having been under his influence two years. Since I came in contact with him I have lived a better life in all ways.

M., 38. He was most helpful by creating within me the desire to be an honorable and useful man, such as I saw him to be. He always met his pupils with a cheery smile and kind word. He was interested in, and joined them in their games without losing his dignity as a teacher. When I became a teacher I recalled his manner of conduct before his pupils, and found that similar conduct before my own won appreciation and good will from them.

M., 20. At the time I came under his care I believe that I was about as bad a scamp as usually can be found. This teacher tried to make a man out of me, and I believe that through his influence I was persuaded to give up many bad habits which, if allowed to grow, would have been of much detriment to me. I was at that time 14 years of age, and remained under his care two years. Before I came under his influence I was very much addicted to lying, and I believe it was through him that I was made to stop.

M., 20. In government he appealed to our honor. He taught us that we must master ourselves before we master others.

M., 27. She helped me morally more than mentally. She taught me what was due to my teacher and to my playmates. She always pointed out very plainly what our duty was, and was not slow in telling us if we failed in doing it. She also set the example for us, so that we had no argument left for doing other than as she told us to do. She was kind and also very firm, but used good judgment; by good judgment I mean that she never asked anything of us that was unreasonable, but what she did ask we had to do. I was 16 years old.

M., 24. He filled me with a desire to be like him. I was 13, and under his care eight months. He awoke me to the great good which comes from education. He impressed me with his frankness, honesty and impartiality, both in and out of school. I hold my present efforts to advance to be very largely due to the influence of his encouragement. He was an athlete. I wept when school closed, thinking that no one else would ever take so much interest in me and help me so much.

W., 24. The teacher who did me most good was most helpful to me in teaching me life's true principles. He taught me always to look upon the helpful side of life and to exert all of my energies in that direction. I was 12 years old, and remained under his care six years, or until I finished the high school in that place. I always shall remember a short conversation which we had about what I should do after I had finished the high school work. He was anxious that I should become a teacher. He commended my attitude toward children and my work in his school, and told me that he knew that I could make a successful teacher if I would only try. And if I did undertake it to begin with the determination to succeed. I did try, and was successful during the two years which I taught. At times when I felt discouraged I would recall his words and brace up and try all the harder. He taught me to look upon the bright side of life. He, himself, had much to contend with, yet he was always cheerful and never despaired. His example has helped me over many rough places, and I have always felt that if I had never known him, in some of my trials I certainly would have lost all hope. I think that a great part of his interest in me was due to the fact that I had no mother living, and his daughter, a girl of my own age, and I were very close friends. Naturally this brought the father and me closer together.

W., 29. She was most helpful to me by her beautiful life and the little things she would say to encourage me to do more and better. I was 13 when I went to her, and remained under her care two years; but for three years after I was almost constantly with her. She stopped teaching but not influencing. I was always an ambitious dreamer, and she was so sympathetic with all my moods. One sentence she used to say to me when I had dreamed out loud to her, always has remained with me: "Make the dream come true, child; you can do all things through Christ, but not without him." The next chapter is sadder. For five years I believed her to be all that was good and beautiful, and then came the proof that even I who loved her so could not withstand. I was forced to know that she was weak, though I had believed her strong; sinful, though I formerly would have staked my life on her purity. For a time I did not believe in any one, then the old ideal reasserted itself, and I still love the teacher as she used to be. She was, and is, my ideal of a teacher.

W., 22. At 17 I attended Summer Normal at A,—and during those eight weeks I was under the influence of one teacher whose help was far greater than all of the previous training I had had. I have always felt that the influence of this man marked a decided turning point in my life. He stirred me up in every way. He set me thinking; the world appeared more beautiful to me; my ideals were higher,—in fact I remember that it seemed like living a new life. I was just preparing to teach, and he intensified my desires to be a true teacher. I loved him most of all the teachers I have had because he called forth the best there was in me.

W., 33. Most helpful in that both by her life and teaching she constantly held before her pupils such high ideals. I had subjects with her that required most detailed and definite work, but the drudgery of this was not felt on account of the broad and scholarly view which she gave of the subjects. When a teacher can put that indefinable something into a lesson in astronomy so that the influence will be felt for 15 years, she has what I, through experience, both as a student and teacher, have come to regard as true teaching power.

W., 22. She inspired me to do something, and aroused in me an aim. I admired her personality and character and wanted to be like her.

W., 21. She impressed upon me the value of individuality and sincerity by her example in a way that no amount of preaching could have done.

W., 24. By teaching me to appreciate pure literature. I was at just the right age to appreciate flashy love stories. She found out that there was a tendency of this sort in the whole class. It was a country school, and just ordinary reading was all that was required, but she introduced us to some of the best authors; she read to us, and had us to read pure and wholesome stories, poems, etc. It seemed as if she were personally acquainted with the authors. We country children talked about great men and seemed to know more about them than we afterwards did when we came to study them in high school. I have always tried to follow her example.

W., 19. My great admiration for her commanded my respect for her as well as awakened my own self-respect. I used to think that if I only could be like her my cup of happiness would be full. I was 13 years old, and remained under her care but one year, but I had known her all my life. Thus the influence which she had over me was exerted as much out of the school-room as in it. There was no one thing which she said or did which particularly influenced me, but it was her actions, her intelligence, her refinement—everything about her, which I admired. She is taller than the average woman yet well proportioned, and moves with admirable ease and grace. Her unusual amount of light hair was her chief beauty. She had one of the noblest and most intelligent faces I ever saw,—a high prominent forehead and very pretty gray eyes. She is a woman of unusual intelligence, and at that time impressed me with the incalculable number of things she knew. She was always very pleasant, could laugh, or easily sympathize with a person. She never indulged in loud or boisterous conversation or laughter, yet was by no means of a sullen disposition. Her conversational ability was above the ordinary,—the best and most expressive English seemed to flow smoothly and without effort from her lips at all times. The reason I loved her most was because she was always so pleasant, knew such a lot about everything, and flattered my thirteen-year-old dignity by treating me more as a young lady than as a child.

(*Condensed Expressions.*)

Figures at left of these expressions indicate age at time of influence.

W., 13. Gave me rigid ideas of right and wrong. Tided me over from 15.

W., 12. Raised my ideal of woman and scholar.

W., 17. By her nobleness of character as an example.

W., 16. Inspired me to higher aspirations.

W., 14. Gave me a truer idea of what my aim in life should be.

W., 13. He lived such a good life.

W., 13. He laid the very foundation of my character.

W., 14. He was kind and taught me to do right for right's sake.

W., 15. By his pure character. I wanted to be noble and good.

W., 19. By his stability and strength of character.

W., 14. By her beautiful life. She gave me the highest ideals.

W., 8. She was an ideal woman. I wanted to be like her.

W., 17. By his morality. He was true to what he represented.

W., 15. He inspired me to do right. Kindled a burning desire for extensive knowledge.

W., 13. By his Christian character. He had a good moral influence on me.

W., 9. He was just good, and I loved him.

W., 17. He gave me a different view of life.

W., 18. She respected me, and inspired me with the desire to live nobler.

W., 15. Gave me the desire to make something out of myself.

W., 21. By her beautiful character and the grand thoughts she gave us in her literature class.

W., 13. He was fearless of opinion in doing right. I have tried to become so.

W., 15. She exemplified the worth of a pure, noble and beautiful life.

W., 14. By her sweet Christian life and impartiality.

W., 33. He taught me the deep meaning in ordinary things. It was all a revelation to me and the beginning of a new life.

W., 17. She was grand; she understood people and could manage them.

W., 14. Helped me overcome a dislike for study and gave me a better purpose.

W., 13. He saw the beauty in everything. He taught me the dignity of duty.

W., 7. By her example of true womanhood. I tried to follow her.

W., 13. By his cleanliness. He made me love refinement.

W., 14. She inspired me to everything good. I wanted to be like her.

W., 18. By her purity of life. Then she was so quiet, ladylike and controlled.

W., 15. Corrected my faults without condemning me.

W., 15. He lived a consistent life. He made me want to be sincere and good.

W., 10. Put sweetness into my life. She was a Sister of Charity.

W., 16. He taught me how to love and worship Christ. He was sympathetic.

W., 14. Made me desire all good. He led an exemplary life.

M., 16. Gave me higher ideals of life.

M., 10. In pointing out the right road to life.

M., 14. Gave me a desire to labor harder and reach my goal in life.

M., 15. She inspired me to conquer my circumstances.

M., 16. Gave me a higher ideal and encouraged me to lead a better life.

M., 9. He was a model worthy of imitation.

M., 16. By reforming me. I was poor in my classes, cared little for study and always in mischief.

M., 22. She gave me new aspirations and nobler ideals of life.

M., 15. He aroused my ambition and the hope to make my mark in the world.

M., 16. He was my ideal. He inspired me to honesty and virtue.

M., 14. Created in me the loftiest of ambitions.

M., 15. Gave me an inspiration to do some good in the world.

M., 17. He made me feel that there was something worth living for.

M., 27. He gave me a taste of the higher life.

M., 17. I was 17 and could neither read, write nor cipher, but I was in earnest and he did everything to help me.

M., 21. He gave me an incentive to seek truth, and God through truth.

M., 15. By his own example of manliness.

M., 12. Filled me with a desire to be like him intellectually, morally and socially.

M., 14. Not mentally, but morally. I was a truant. She was patient and won me.

M., 15. Awakened me to a purpose in life.

M., 17. In the high moral ideal he inspired in me. I felt that I could even surpass Christ in beauty and holiness.

M., 16. He set me afire. I wanted to be the greatest and best man in the world.

2. *Intellectual Influences.* 132 men and 104 women referred to the greatest good as coming in the form of an intellectual awakening, a desire for knowledge, or some intellectual possession.

W., 24. By arousing me out of a sort of mental stupor into which I had fallen. He did so by making things both very plain and very interesting. I was impressed with his sincerity in showing us how to choose the right paths in life. To me he was an ideal teacher and a perfect gentleman in every respect. I have always considered him as an example worthy of imitation. I was 12 years old.

W., 25. It was the year in which I graduated from the common schools and was a turning point in my life. She encouraged me in my resolve to obtain a higher education, and helped me to plan the best means to accomplish this end. I was 16.

W., 19. In recalling my past teachers it is difficult to judge as to which one did me the most good. I had one teacher at 14 who helped me to express my thoughts better than any other teacher I ever had; he also taught me how to classify and retain what I had learned, but morally he did not help me at all. When I was 16 I had a teacher who helped me most in that line. He showed me my possibilities better than any teacher ever had, and gave me more of an inspiration. In neither of these classes did I feel that I was helped as much as I could have been by a closer relationship to the teacher.

W., 25. Led me to see the advantages of a higher education and quickened within me the ambition that had been lying dormant. I was 20.

W., 25. In teaching the different branches of subject-matter, he would show of what value they were in life, and so awakened an interest which stimulated me to very earnest effort, and made me have a desire to be benefited by these valuables of life. I was 21 and under his care one year.

W., 21. In teaching me how to study. She explained everything so fully that subjects which I once disliked very much, I grew to like the most. It was a great pleasure to me to study while under her influence. She always told me exactly what she expected of me and I did it.

W., 23. He constantly held before us the enjoyment as well as the value of an education, and so enthused us that his ideal became our own.

M., 25. He was most helpful to me in that he explained points so clearly as to awaken an interest in my work. I was then 16 years old and remained under his instruction for two years. His influence was the cause of my making a start along educational lines.

M., 22. By patience and perseverance in requiring thoroughnesss of work instead of being satisfied with superficial knowledge of merely enough to carry one through a recitation.

M., 24. By encouraging me and giving me a feeling of confidence in myself; by creating in me an intense love for history. It was his general attitude toward me rather than any one thing which he said or did which influenced me. At the time I came under his influence I was far from being studious, although I was not lazy. I was in an attitude of indifference to all school work except history and biography. He immediately detected this and for some time allowed me to neglect my grammar, arithmetic, etc., but gave me all of the history and biography I could read. It was not long before I became interested in all of the other lines of school work, and my thirst for knowledge in general became very keen, although my love for history remained the strongest.

M., 25. His very strict discipline caused me to become interested in my studies and ever since that time I have had a liking for them. I was 12.

M., 22. Devotion to his work and his friendly ways, together with his firmness in carrying out anything he thought to be right. He created in me a greater desire for knowledge; also a desire to put into practice that which I already had. I was 15.

M., 18. He was friendly to all, and by his kind yet strict manner of conducting his recitations I became greatly attached to him and to school work, and from that time on I have been a more careful student. I was 14.

M., 29. He was the cause of my staying in school. He helped me by trying to keep me looking to some future good that would come from a broad and liberal education.

M., 19. By impressing upon my mind the usefulness of an education. He is my ideal of a teacher, and I am now striving to attain to the perfection which he exemplified. I was 15.

M., 19. He seemed to broaden my mind to a glimpse of the real relations of things. He seemed to consider me not as a child any longer but as a man.

M., 25. He aroused my ambition to go on to school and get a higher education. Really he revealed me to myself. I was then 19 years old and under him for two years. Previously I had liked all of my school work about the same, but this teacher gave me a great liking for science. My university work is now in that line. He tore down all of my superstitious ideas about religion.

M., 23. She was helpful to me in getting me to graduate from the common schools and go on to high school, and later to come to the university. I was under her care two years when I was 15 and 16. My father was opposed to my taking the examination for graduation from the common schools. She insisted on my doing it. I passed satisfactorily and through this encouragement was stimulated to go on.

(*Condensed Expressions.*)

Figures at the left indicate the age at the time of the influence.

M., 13. Gave me a respect for learning and made me want to be a scholar.

M., 17. He helped me most in my studies.

M., 13. Gave me a burning desire for knowledge, especially literature.

M., 17. His scholarship created in me an ambition and love for knowledge.

M., 16. By explaining things clearly and demanding thoroughness.

M., 17. Self-direction. Gave me a start in my studies and let me go.

M., 16. Gave me a burning desire for knowledge.

M., 20. Taught me to do my own thinking.

M., 14. Created a thirst for knowledge and gave me the loftiest of ideals.

M., 12. Caused me to become deeply interested in my studies.

M., 18. The interest he took in my welfare inspired me to get a better education.

M., 22. My education had been sadly neglected. He encouraged me by taking a special interest in me.

M., 14. I was about to quit school. He encouraged me and got me awake.

M., 27. He gave me a taste of transcendental philosophy.

M., 16. By the insight he gave me into the subjects and the incentive to learn.

M., 26. In organizing, classifying and correlating my knowledge.

M., 13. Led me to see how much there is to be learned, and its beauty.

M., 12. I had never cared for study. He got me interested.

W., 15. He gave me a deep love for study.

W., 9. In arousing my interest in school work.

W., 13. By her clear explanations.

W., 19. By cultivating the power of attention and accurate thinking.

W., 13. Enabled me to be precise.

W., 13. Taught me to think and to persevere.

W., 13. Gave me a love for study.

W., 16. Gave me an ambition to secure a higher education.

W., 33. His manner of teaching. Made everything clear and delightful.

W., 15. To think the whys—the reasons of things.

W., 16. Inspired me to go on beyond the grades.

W., 11. Started me to think for myself.

W., 10. Taught me the multiplication table.

W., 15. Kindled in me a desire for higher education.

W., 20. Quickened my ambition for higher education.

W., 17. Awakened a keener desire for knowledge.

3. *Personal Interest*, *Kindness*, *Encouragement*, *Sympathy*, *etc.* As was indicated above, this influence could have been discussed as a phase of moral influence, but its importance, together with the fact that it emphasizes the *cause in the teacher* rather than the *effect in the pupil*, warrant a separate treatment. 132 men and 122 women testified to this personal attitude of the teacher,—this personal interest taken in them,—as being the cause of the greatest good which they ever received from their teacher. The pedagogical significance of this point will be considered later.

M., 21. He seemed to take a great interest in me. I was 19 years of age, and under his care five months. I was a stranger in that district, and he was kind to me on the first day of school. I had been out of school four years, and told him that I would be considerably behind my class. He told me that by the end of the term I would be as far along as any one in the school. This saying encouraged me so that I went to work with all vigor.

M., 26. She was most helpful to me in that she was kind to me, believed in me and never failed to give me credit when it was merited. Her kindness drew me to her, and I found pleasure in obeying her. I had a bad record, and she had been informed about it. At her earliest convenience after school opened she told me in a private interview that she did not believe that naturally I was any meaner than other boys, and that she was going to give me a chance and do all in her power to help make me a great and good man. Rebellious as I had been; I was completely conqured by her kindness and the show of affection which my soul so longed for.

M., 21. By showing his interest in my education and development; by placing my studies before me in such a way that I could grasp them; by giving me special lessons on Saturdays; but most of all by having a pleasant look and kind word for every one he met. I was 18 when under his care.

M., 27. By his very manner and life. I was 15 and about to graduate from the country schools. One day he approached me in a friendly way and said: "Elmer, of course you intend to enter high school and finally college." I never had thought of anything higher than the little log schoolhouse in the country. He went to the trouble of supplying me with the catalogue of a good secondary school. This greatly interested me in a new life which since that time I have been seeking. He was pleasant and good natured.

M., 24. By his encouragement and his helping me to form higher ideals, as well as to excite in me the need of a higher education. He took me into his confidence. He had good habits, was always accurate, friendly and quiet. I was 16, and under his care two years.

M., 21. I was 14, and he was my ideal. While in college he was a foot-ball player, the star of the team, and that made him almost a god in my eyes. He was popular everywhere,—was an orator, a good singer, and I feel yet that he was just about an ideal man. He took a personal interest in me which delighted me, and my sole aim was to be like him. He has an influence over me yet that no other teacher has or ever had. My sole delight was to please him, and words of praise from him were very sweet indeed.

M., 24. He encouraged me in my work. He changed my life by leading a better life than I was leading. I imitated him. I was 18.

M., 27. His words of praise, encouragement and kindness won me to him and gained my confidence. He particularly influenced me by joining in our games. He had a pleasant appearance, a kind disposition, and sensitive, sympathetic nature. I noticed that he was deeply affected while correcting a pupil; he was pained and hurt more than the one corrected. I loved him most because he encouraged me and never scolded.

M., 23. It was her habit to ask one of the pupils to remain each evening after school to help her. She would then talk to him in a very easy way that soon broke down all reserve which the pupil might feel. She used frequently to ask me to stay. Sometimes she would read to me, and sometimes she would give me a book to read for myself. During school hours I never saw a school teacher that was more strict, but I soon found out that in reality she was very kind and always ready to help every one. I was 12.

M., 21. I had committed some misdemeanor. For this she talked to me in private and as the tears came into her eyes, I never felt so mean in all my life before. I resolved to do better and correct my faults. I was 14.

M., 22. She heard the remark made one day by a pupil in a taunt that I was going to unite with the church. After school was out that day she talked to me privately about the matter in a very kind and sympathetic way. I cannot value too highly the kindness which she did me then.

M., 25. He did me the most good by his encouragement and by getting me out of the ways of the world into religious ones. I was 14 years old and under his charge about five years. One day at school during a leisure hour he gave me a private talk which turned my course in life from that of a street loafer to one of close application and moral habits.

W., 32. I think my teacher helped me most by showing me the love she had for me. I had a very ugly disposition. My parents dying when I was quite young, I was left to the care of some people who did not seem to care for me. One day I did something wrong in school and instead of speaking harshly to me as I usually was spoken to, she came to me and lovingly put her arms around me and with tears in her eyes, she said: "It is because I love you that I want you to do right." I cannot express the feeling I had at that time, nor the love which I have had for that teacher ever since.

W., 21. I recall two. They were teachers in the truest sense of the word. The way they helped me was by their beautiful characters, and the refinement and dignity with which they always conducted themselves. They showed by their actions and words that they were interested in me. They won my love and hearty co-operation in all they did. I was 13 and 16. The first one was a lady; the second, a gentleman.

W., 24. I was always ready to do something wrong when the principal was out of the room. One day he asked me to take charge of a class while he went into another room on official business. He placed confidence in me. I put myself in his place; it taught me to do unto others as I would have them do unto me.

W., 29. It occurred during a writing period. I had become very angry; I had a very bad temper and when anything provoked me I could not think of things mean enough to say. He kindly showed me that I was only wronging myself, and that for my own sake and success, I would have to learn to control myself. This incident has influenced my whole life.

W., 20. By one word and her eyes. She seldom used the word "dear." One day I had been very disobedient; she was kindly talking to me about it, and in the course of her conversation, she called me her "dear" girl. I was 13.

W., 19. By being kind to me and talking to me when my mother died.

W., 21. I believe that because of judicious praise which he gave to worthy effort have come my great interest in education and my desire to excel in everything I undertake.

W., 20. She helped me most in that she was always kind, pleasant and encouraging. One thing that particularly affected me was the respect she had for other people's opinions on religion. I was 18.

W., 22. He made me feel that he was interested in me personally, and that he was glad when I did my best. 14 and 17.

W., 23. She seemed so interested in me and so willing to help me in my studies that I was encouraged to remain in school. I was 18.

M., 19. She seemed to understand me so well, and always gave me special help and was kind to me. She was very religious, kind and tender-hearted, but very severe. I was eight years old when under her care. She never insulted me in any way, but when I was to be corrected, did it privately and in a very touching manner.

W., 34. She was sympathetic and seemed to take a personal interest in each individual pupil. She stimulated me to greater effort by encouragement. She gave me higher ideals of life and made me feel that I should strive to attain them. I was 18.

M., 23. Gave me sympathy. I loved him and would do anything for him.

4. *Self-Reliance.* 26 Men and 41 women directly referred to the greatest good as coming in the form of self-reliance, self-confidence, self-dependence, etc.

W., 30. By teaching me self-discipline and inspiring in me a love for study. His life was an inspiration to me to be kind, true and self-reliant. I was 13.

W., 22. She helped me most by teaching me to rely upon my own exertions if I wished to succeed. She gave me the proverb, "Seest thou a man diligent in his ways? He shall stand before kings," for a motto. I shall never forget the lessons she taught me in striving for something higher and better. I was 13.

W., 17. She gave me new courage and interest, and made me to rely upon myself more. I worked harder to get my lessons, for it seemed to hurt her when I did not have them.

M., 19. She was most helpful to me in teaching me to think for myself. She had a true soul and it shone forth in her face which was a great inspiration to me. I think I loved her most because she seemed to have an interest in me. I was 16.

M., 25. He helped me to have confidence in myself. Previous to the time I went to him my teachers seemed to have a pick at me, and this discouraged me, and made me disobedient. There was something about this man that made me take no pleasure in disobeying him. He seemed to have a little confidence in me and this encouraged me a great deal.

M., 24. He was most helpful in teaching me to rely upon myself, to be independent and live an ideal life.

M., 23. In the way of teaching me to think for myself and to reason out things without his aid. He would often tell me that if I ever wished to accomplish anything in this world, I must have a great deal of self-reliance and to cling to no other person for help.

5. *Social Advantages.* There were 10 women who testified to social advantages. One remarked, "She taught me how to walk across the room gracefully." Another testified, "She taught me how to hold my shoulders. I was slightly round-shouldered, and this was a constant mortification." A third writes, "She taught me a graceful carriage." A fourth, "She taught me what to do with my hands and feet," etc.

IV. The Sex of the Teacher whose Influence was Most Helpful.

Out of the 360 men who testified to good influences, 291 received it from men, and 99 received it from women.

Out of 176 who testified to moral good, 129 received it from men, and 47 received it from women.

Out of the 163 who testified to intellectual good, 133 received it from men, and 30 received it from women.

Out of the 132 who testified to personal kindness, interest, etc., 87 received it from men, and 45 received it from women.

Out of the 338 women who testified to good influences, 168 received it from men, and 170 received it from women.

Out of 164 who testified to moral good, 80 received it from men, and 84 received it from women.

Out of 104 who testified to intellectual influence, 55 received it from men, and 49 received it from women.

Out of 122 who testified to personal kindness, interest, etc., 58 received it from men, and 64 received it from women.

Out of 41 who testified to self-reliance, 19 received it from men, and 22 received it from women.

Out of 10 who testified to social good, 1 received it from a man, and 9 received it from women.

I would recall attention to the fact that the great majority of the testimonials that form the basis for this study came from the Northern Indiana Normal School at Valparaiso, Indiana. The yearly attendance at that school is between 3,000 and 4,000. I understand that about 15% are from Indiana. Nearly all of the remaining 85% are from the other States that belong to the North Central Division. The returns collected from that student body would not represent conditions in Indiana so much as conditions in the entire group of North Central States. In Indiana, at present, 47% of the teachers are males. This is the highest percentage of male teachers of any of the States of this group. Ohio comes second with 41%, and Missouri follows with 39%. But the conditions now are not what they were from four to thirty years ago when these people testifying were going to school. The period from 1870 to 1896 will cover the school period of practically all of these people. During this time Indiana's per cent. of male teachers decreased from 60.5% in 1870 to 48% in 1896. The per cent. of male teachers for the entire group of North Central States decreased from 43.2% in 1870 to 30.6% in 1896. As was pointed out above, the conditions indicated in these returns are more nearly representative of the whole section than of Indiana. It thus appears that at no time in this period were there as many male teachers in this section as there were female teachers. This indicates that these people testifying actually came under the influence of more female teachers than male teachers. This would give the female teachers the advantage in opportunities for doing good. Notwithstanding this, more than four-fifths of the men (291 out of 360) and half of the women (168 out of 338) testify in favor of male teachers. These data would indicate that men are better teachers than women. But since the majority refer to the teacher they had during adolescence it might be better to say that at any rate male teachers are as a rule better than female teachers for pupils in this period of their development. Even if this were a general truth, it would not be out of harmony with the general concensus of opinion that the adolescent should have both men and women teachers.

V. Length of Time Under the Care of the Most Helpful Teacher.

308 men and 302 women answered the last part of the second question definitely. Of the 308 men, 40 were under the care of the teacher who helped them most for periods shorter than six months; 115 for year-periods that varied in length from six to ten months; 90 for two-year periods; 43 for three-year periods; 13 for four-year periods, and 7 for periods longer than four school years, the longest period given by any one being seven years.

Of the 302 women, 31 were under the care of their most helpful teacher for periods shorter than six months; 117 for year-periods varying in length from six to ten months; 69 for two-year periods; 37 for three-year periods; 17 for four-year periods, and 32 for periods longer than four school years, the longest period being ten years.

VI. *Personal Description.* The mental traits were usually referred to and emphasized in giving the way in which the teacher was most helpful. Such expressions as kind, pleasant, sympathetic, encouraging, dignified, honest, strict, vigorous, clear, good, beautiful in disposition, etc., abound. Nearly all testified as to whether the teacher were handsome or ugly, and usually gave height, weight and complexion, etc., and almost invariably commented upon the matter of dress. as to neatness and taste. Many emphasized special qualities such as a teacher's being an athlete, or having an especially graceful carriage, a musical voice, beautiful teeth, eyes, hair, etc. Some referred to peculiar mannerisms and automatisms that really ought to be classed as defects, yet nevertheless were attractive to the student and imitated by him in many cases.

VII. *The Teacher Loved Most.* 307 men and 291 women answered questions 6 and 7 of List I, which were as follows: Single out the teacher you loved most and tell what made you love her. Was she the same one that helped you most?

Of the 307 men, 211 loved most the teacher who helped them most, and 96 loved others most.

Of the 291 women, 176 loved most the teacher who helped them most, and 115 loved others most.

The most invariable reasons for loving the teacher are personal kindness, interest, sympathy, love, cenfidence and goodness.

LIST II.

I. The Teacher Loved Least.

The general direction at the head of List II is: Single out the teacher you loved least: The first question is: Did you have any positive dislike or hatred for her? If so, what caused it? Out of the 698 persons who answered the lists of questions there were 343 men and 313 women who testified to having had at some time in their school experience, teachers whom they positively disliked or hated. There were 17 men and 25 women who could not recall any teachers for whom they had any positive dislike. After we see the effects that are caused by or associated with this hatred for the teacher we can better understand its pedagogical significance.

II. The Cause of the Hatred.

It has been practically impossible to give anything like a satisfactory classification of the causes of the hatred which these people have had for their teachers. The arrangement which follows aims at convenience rather than at a consistent classification from some inclusive basis.

In the first place, the majority who testify, indicate the cause as being what really *was* or what *seemed to be* a malevolent attitude on part of the teacher toward the pupil. This malevolent attitude further shows itself to be one or both of two types, viz.: passive and active. In addition to these two classes between which no very sharp lines can be drawn, we will treat briefly (3), Unjust Punishment, and (4), Sarcasm, Insult, Ridicule, etc.

1. *Passive Malevolence.* This attitude of the teacher toward the pupil is one in which there is the absence of good-will with the tendency to overestimate the worth of the self and to underestimate the worth of the pupil. In testifying to it, those reporting refer to it in such expressions as haughty, proud, disdainful, arrogant, supercilious, conceited, egotistical, vain, presumptuous, boastful, contemptuous, unsympathetic, suspicious, took no interest in us, never smiled, cold, would n't answer questions, did not respect our opinions, would n't notice us, would n't speak to us, etc. The following extracts from the testimonials will serve to illustrate the point:

W., 20. He was harsh, cold, distant, a religious crank, narrow minded and had no sympathy for other people's views. He was cynical, sarcastic, and was thoroughly disliked by all his students. I was 17.

W., 21. She was cross and strict, never smiled during school hours nor talked to us out of school.

M., 26. He was of a suspicious nature, always looking for mischief. He supected those who were above suspicion.

W., 21. He seemed incompetent. I could not respect him. One day he said that he did not take any interest in the senior class and from that moment I hated him. I was a senior in high school.

M., 24. He was "stuck on himself" and was deceitful.

M., 23. She did not like me and did not notice me.

M., 21. His coldness made me hate him.

M., 26. His lack of interest in me.

M., 26. Stern, solemn, had never a kind word and was very homely.

M., 29. She cared for no one and let the children run wild.

M., 38. Entirely too important and treated his pupils as know-nothings.

M., 25. His deceit. He was all smiles on the outside but dark as hell on the inside.

M., 22. Her proud, haughty egotistic ways.

M., 25. He was proud, overbearing and selfish.

M., 28. His indifference to me. He would not recognize me on the street.

W., 20. I had a very positive dislike for her at the time. She wore snowy-white aprons and would n't let us come near her for fear we would soil them with our dirty hands. We wanted a teacher who loved us and I know that we all felt very bad about the way she treated us. I resolved then that if ever I should teach school, I would love all my pupils and that I would not wear white aprons. I was six years old.

W., 24. She was a scold and a crank, and never thought of speaking a kind word to one of her pupils. When I was ten, she whipped me because I could n't pronounce the word Joseph.

W., 25. I did not like her personal appearance as she always carried herself as rigid as a statue. I never saw her face change from its usual cold and haughty expression except when she was scolding her teachers. She was a critic teacher and if ever one of her teachers made a mistake she would make it appear as large as possible before the whole school and the visitors, if any chanced to be present. It was a total disregard for the feelings of others that made me dislike her so much. She often made the remark that "a true lady must always be dignified and avoid showing any excitement or haste." When she gave us those talks I could n't help thinking how well she possessed those qualities and yet how much she lacked of being a true lady.

W., 21. I despised her from the first. She was so very unlike our former teacher. I do not believe she smiled during the entire year unless it was when some of us got hurt on the play-grounds and went to her for sympathy; then she would laugh at us for crying and tell us to keep out of the way. We soon learned not to go to her for sympathy in any of our troubles.

W., 19. She thought herself so much above her pupils; when she would meet them on the street she would never even speak to them. Her general attitude in the school-room affected me so much that I was afraid to move.

There were 66 men and 61 women who testified to this more or less passive type of malevolence.

2. *Aggressive Malevolence.* This attitude differs from the one above in that the teacher assumes the offensive in some form of attack upon the pupils. The sin is one of commission rather than omission. Instead of the absence of good-will, there is the presence of ill-will. In referring to this attitude of the teacher as a cause for the hatred held, the following expressions occur: stern, harsh, cruel, severe, rigorous, unrelenting, cross, irascible, unkind, scold, get angry, get black in the face, lose his temper, fly off the handle, malicious, unmerciful, fiendish, inhuman, tyrannical, ferocious, hard-hearted, quarrelsome, cranky, fault-finding, threatened, called names, etc.,

etc. There were 144 men and 145 women who gave this as a cause of hatred.

W., 19. I was deeply affected at times by the scoldings which he gave us, and became very indignant. My indignation lasted only a short time, nevertheless I had a horror for him and was afraid of him all of the time I was under his care. I was 14 and under his care four years.

W., 21. One time I, together with some other girls, was whispering and playing. The teacher saw us and said: "If you don't behave, I will punish you; and if Rebecca does n't get quiet I will put her over with the boys." It made me very angry for her to select me out from the number to make prominent and to threaten with such a punishment. I was angry for several years,—until I became old enough to see that she was not altogether to blame. But I have never been able to like her, although I have since been thrown much in her company and she has been uniformly kind and good to me.

W., 25. I had a positive dislike for her as a teacher but not as a lady. She was not adapted to school teaching. She would let little things worry her, would get angry and make unreasonable threats which meant nothing but broken vows on her part and irritation and disrespect on the part of the pupils.

W., 20. I disliked him because he was partial to a few from selfish motives in maintaining his position in that school. He cared little for our advancement and frequently in an outburst of passion would remark that "It made no difference to him whether we studied or not; he was drawing his salary just the same." He was tall, dark, irritable and secretive. His methods of teaching were mechanical and devoid of interest, and we gained little outside of what we could have obtained from the text-books. But the thing that annoyed me most was his passionate outbursts of temper in the schoolroom, in which he berated the offending pupils and threatened to "send them home with blood in their boots," or "thrash them till their hides would not hold shucks," etc.

W., 29. He was cross and used the switch without mercy. He often made faces at us and called us simpletons if we did not understand what he wanted us to. He had a high backless chair up front on which we had to sit for committing certain offenses. Once my little brother was placed on that chair and told that he would have to sit there an hour. He fell asleep, however, long before his time was up, and fell off the chair to the floor. The teacher picked him up and boxed his ears in a brutal fashion and placed him upon the chair again, telling him that he would have to stay there through the next recess for falling asleep. At recess I took my little brother home. It caused both of us to leave school.

W., 19. The thing that caused me to dislike her so much was the way in which she called on me to recite. I was very nervous and she soon found that by speaking to me loudly and sharply, she could startle me very much and although I would think that I had my lesson perfectly, I was unable to recite until she started me. She seemed to take particular delight in doing this, and in about five months I was taken home with nervous prostration. We afterwards found that she was not what she pretended to be, and this lowered her very much in the eyes of all her pupils.

W., 26. She was foolishly strict. She would not allow us to look off our books. If we did she would say very mean things to us. One day she and a pupil were fixing a window. I merely glanced to see how they were getting along and she saw me. Turning severely upon me she said. "C—— is a sneak." That remark has its sting yet.

M., 18. She told me one day, without sufficient cause, that I was the meanest boy she had in school. I was deeply offended, and quit school soon afterward. She apologized, but I never could feel rightly toward her.

M., 19. She once punished me unmercifully by pounding me over the head with a book until the blood spurted from my nose, and finally choking me until I was black in the face. It was all for a slight interruption. She said that she would make an example of me. I was ten years old.

M., 21. One afternoon one of my classmates asked him to solve a problem in the arithmetic lesson for him. He tried for a long time and could not solve it. He stood at the blackboard a long time—a class at the recitation bench meantime—and, finally, upon turning around saw the one who had given him the problem smiling. He rushed down the aisle to where the boy was sitting and drew back as if he were going to strike him, at the same time saying: "If you don't stop that laughing I will knock your head off your shoulders." This same would-be-teacher made fun of my sister until she stopped going to school forever.

M., 22. He was egotistical and overbearing. I disliked him on account of a habit he had of "roasting." There were several boys and girls upon whom he would call for the most difficult points in the lesson. Upon their failing to answer his questions he would lay his book down upon the desk and walk up and down the room and "roast" them most scathingly. If they dared to open their mouths in explanation he would turn white with rage. I knew it to be the habit of one boy to stay up till midnight studying his lessons only to go and be most insultingly condemned for "not having looked at the lesson." Under former instructors this boy had been the best student in his class, and afterwards made a very brilliant record in the university.

M., 21. He was so cross that he inspired terror in me. He made me feel that he disliked me. It seemed that he took particular delight in irritating me.

M., 32. His crossness,—almost savageness,—made me hate him.

M., 21. I had no confidence in the solidity of character. I could see also that he was not interested in us as was very plain from his class-room actions. He once whipped my chum unmercifully for things for which others and I were to blame as well as he. I was filled with a great deal of boyish wrath when my chum showed me the welts, black and blue. I was 14.

M., 25. He was quarrelsome; had no control; allowed us to do as we pleased sometimes, and punished for the slightest offense at others.

W., 24. By the overbearing way in which she treated her pupils.

M., 22. He whipped a large boy one day very brutally. I was about eight years old, and sat up front. The whipping occurred near me, and of course I had a very plain view of it. I can now see the lad as he lay stretched on the floor unable to get up. The case was taken to court, but I have forgotten the result.

W., 27. Because she scolded from morning till night, and I could do nothing to please her.

M., 25. He called us boys hogs, and said that he would use us as such.

M., 21. He had a way of making slighting remarks about the teacher who preceded him in the school which he was trying to teach. This former teacher was well liked by every one, and these remarks were very offensive.

W., 22. His unkindness to a foolish boy and girl. I resolved that if ever I taught school I would have more patience with that kind of pupils than with the others.

M., 21. She was always threatening and never carrying out her threats.

M., 21. She told me that I would never amount to anything in the line of school work. It discouraged me very much. I afterwards found that she did it for pure meanness.

M., 23. She was very homely, cranky and cross.

W., 19. Because she was very good to me out of school, but while in school was a perfect tyrant.

W., 21. She was cutting in her remarks; had an ungovernable temper.

M., 22. He was irascible; seemed to have no sympathy or fellow feeling for his students. Then he was not one whom a person could respect as a man.

3. *Unjust Punishment.* Aside from the injustice implied in nearly all of the cases reported in the previous class, there were 103 men and 102 women who specifically designated unjust punishment as the cause of the hatred held.

W., 19. I had a perfect hatred for this teacher. He was deceptive and unjust. He seemed to take particular delight in inflicting pain upon his pupils. He had one punishment which he always gave pupils for writing notes. He would make them lie flat down on the floor. Upon one occasion he ordered a boy to come up and lie down on the platform. Upon the boy's refusing, the teacher started for him, and the boy ran down the stairway. At recess three other boys ran away. The next morning he whipped one of the boys with a buggy whip, breaking it upon him. He then twisted a rope and whipped the other three. One of these he struck but three times because he was partial to him. One of the others he whipped unmercifully, then told him to take his seat and find out where the arithmetic lesson was. The boy replied that he already knew where it was. Thereupon the teacher called him back and ordered him to take off his coat and he would show him how to answer back. While the teacher was getting a whip from the recitation room the boy ran away, but came back after a few minutes and asked the teacher to forgive him. He would not listen to the boy, and started to whip him again, but the boy escaped from him, ran away and never came back. This teacher's temper was ungovernable to the extent of insanity in some cases. He insulted me by telling me that my parents did not bring me up right. He also falsely accused me of doing many mean things. The effect will last forever. I will never teach school until I can control my temper, and I shall never accuse any one until I am positively assured that I am in the right.

W., 21. He unjustly accused me of writing notes and whispering. He would punish me "for not working," although I was hard at work all the time, but perhaps did not have my eyes riveted to my book. He punished some of the boys with undue severity. Upon such occasions he would order the janitor to lock the doors and leave the room. We were forbidden to leave our seats upon penalty of being punished in the same way in which he was brutally whipping some victim. The effect upon me will last forever. For two years I was almost a nervous wreck on account of this teacher. I do not believe that it is right to punish a child before the school, and I further believe teachers should control their tempers. I was 17.

W., 25. In trying to rule her school by iron-clad rules she punished those that tried to do right the same as those that aimed at doing wrong. One day three or four girls had stooped to pick up things from the floor, such as pencils, bits of paper, etc., and she brought them out before the school and whipped them around the legs with a raw-hide whip, leaving marks. Another was her way of sending little children up to the principal for whispering and other small offenses, instead of attending to the cases herself. It has taught me not to deal with all children in the same way.

W., 26. I felt that she did not treat me justly, as she did not give me a prize which she had promised the one who would get the greatest number of head-marks in spelling, and which I fairly won.

W., 25. She was my aunt and tried to take advantage of our relation to correct others through me. She had the word "whisperers" written on the blackboard, and those who whispered had their names written below. Once, about three weeks before an Institute, she announced that all those who whispered from then until Institute would see their names written on the board that day. Quite a number whispered, but when the "whispering roll" was called, gave in "perfect" except a sort of half-witted boy and myself. Our names were written in the most conspicuous place on the blackboard, and my mother insisted upon my attending Institute and so I had to go. I felt at the time that I was disgraced for life, and that night I cried and wished that I had told a falsehood and answered "perfect" to roll-call. I felt this humiliation more or less for several years. I do not know what effect it has had on my life. I try to forget it. I was 13.

W., 22. It was while I was in the third grade. It seemed to be a favorite practice to carry a little whip at all times. She punished much and unjustly. I have a remembrance of having seen her whip one boy very severely, and when some of us cried, she switched us. I was very much afraid of her. I have never been able to find any grounds for her unjust treatment of the pupils that were under her charge. I remember her yet with a great deal of dislike and resentment. She had but little patience and was uncharitable. I am sorry to say that I never have fully overcome my intense dislike for her. If she influenced me in any way it was in the resolve that if ever I should teach, I would try to win the respect of all my pupils, punish sparingly and never promiscuously as she did.

M., 21. She was everlastingly scolding about something. Once she unjustly threw a boy on the floor and stood on him with her knee. She would let her temper get the better of her and do the most ridiculous and undignified things.

M., 27. What I considered brutal and unjust punishment.

He gave me a severe whipping with a heavy stick. It engendered a feeling of hatred and revenge which I feel yet.

M., 29. He punished me when I was not guilty, by making me stand upon the rostrum with my hands outstretched with a book in each hand and another on my head. When my arms would get tired and lower through fatigue, he would strike me over the knuckles with a ruler. It made me fear him and ever afterwards dislike him.

M., 32. She seemed to think that I was a being without a single good trait. She misinterpreted everything I did that was good, and if I did get my lesson said that it was a wonder. She whipped me for what a "good" boy did and told me that I was born to be hanged. I can forgive her now for she was ignorant of what she did. However, I cannot love her.

M., 20. I hated her then and do yet. One day while playing marbles, I said "Jesus." She then threatened to wash my mouth out with soap. The threat so affected me that I did no good under her after that. I was mean and was forced to leave the school. I still have a profound hatred for her. It so influenced me that I dread women teachers till I get perfectly well acquainted with them.

M., 27. It was on account of a false accusation and threatened punishment together with a gross insult. It was my senior year in high school, and lacked but six weeks of commencement time. I was valedictorian and had my oration composed and committed. One morning during prayer, some misdemeanor was committed by some member of the high school. The principal's head was bowed and of course she did not see who committed the offense. She was a cranky, irascible old maid of very questionable age whom we all hated. She had manifested a dislike for me throughout my high school period. She was ungovernably angry and at once accused me of the misdeed and berated me most abusively. She took me to the superintendent's office, told him the nature of the offense and charged me with it. The superintendent made no further inquiry about the affair, but closed the office door, put a large table against it after locking it, walked over to a large case and took from it a raw-hide whip, and said that he was going to whip me. I calmly told him that I was not guilty of the offense charged to me, whereupon he angrily replied, "You lie and I'm going to thrash you." He saw me put my hand in my pocket. He ordered me to take it out. I refused to do so, and he asked me if I had a knife. I made no answer except to tell him to strike me if he was going to. He put up the whip, removed the table, unlocked the door and told me to return to the assembly room, and he would settle with me later. I returned to it long enough to get my books and then I left school forever. The thing has embittered my life and it has been the struggle of my life to keep from killing that man. Recently, he had the audacity and gall to come up to me and offer to shake hands with me. Although the affair occurred nine years ago, my hatred has not abated a whit. I refused to shake hands with him, and told him forever to stay out of my way.

M., 21. Because he would scold us in the worst manner possible; called us brutes; make us hold up our right hand, put our left over our heart and swear that we would not whisper.

W., 25. She was not careful about her personal appearance. She would often come to school looking very slovenly and untidy. Then I shall never forget one time when for a very slight offense she made me sit with a dirty, filthy, ignorant boy, whom all the pupils detested. I have never been able to forgive her for it, for I felt that if I deserved punishment at all, some other mode would have been more nearly just. As it was I hated her at the time and felt that I would risk anything to pay her back. At another time she made my little brother sit between two large negro girls. This was unjust both to him and the girls.

4. *Sarcasm*, *Ridicule*, *Insult*, *etc.* 19 men and 33 women gave these as causes of the hatred. I shall give but a few examples.

W., 22. He was one of my high school teachers, and was a very smart man. He read a great deal and was generally well informed, and in many regards was an excellent teacher. But there was something so repelling about him. He ruled entirely by sarcasm. He showed no discretion whatever, and if ever I came to class without my lesson perfectly prepared, or if I made a mistake, he would make some sarcastic remark about it in the presence of the class and make me feel as little as possible. He always took particular pains to make one feel one's inferiority. It did not take long for this kind of treatment to affect me deeply. I turned to hate him thoroughly and do yet.

W., 20. She insulted me by telling me during one of her fits of anger that my conduct was unlady-like. She apologized before the school, but I never forgave the insult. The effect has lasted eight years. I never recognized her after leaving her charge.

W., 19. She called me a liar. I was very angry and humiliated at the time, but it soon passed away. I was 13.

W., 23. One thing that insulted me and made me exceedingly angry, occurred one day at noon. I was sitting very quietly on a seat opposite him, and all at once he reached over and kissed me. I was very angry, yet helpless, and knew not what to do. I was only nine years old.

W., 20. Every day after ringing the bell she would tell us that we were barbarians and would end our careers in a reform school or prison.

W., 21. She called a young lady a fool. The very thought of the insult unnerved me until I could not study, and my feeling for the poor girl almost made me cry.

M., 24. He ridiculed and made fun of us.

M., 22. He was too smart and insulting.

M., 21. Called me a blockhead.

M., 28. He once called me a blare-eyed idiot, and said he'd knock my brains out.

M., 20. He hated me. I got the highest honors in the class. He spoiled it by saying publicly that sometime the poorest pupil could do that.

M., 25. Had "pets," used ridicule, and would swear in the presence of pupils.

There were 33 women and 49 men who gave "partiality" as the cause of hatred; 88 women and 92 men gave "incompetency," meaning either poor scholarship, poor method, inability to govern, or physical defects.

III. Sex of the Teachers Disliked.

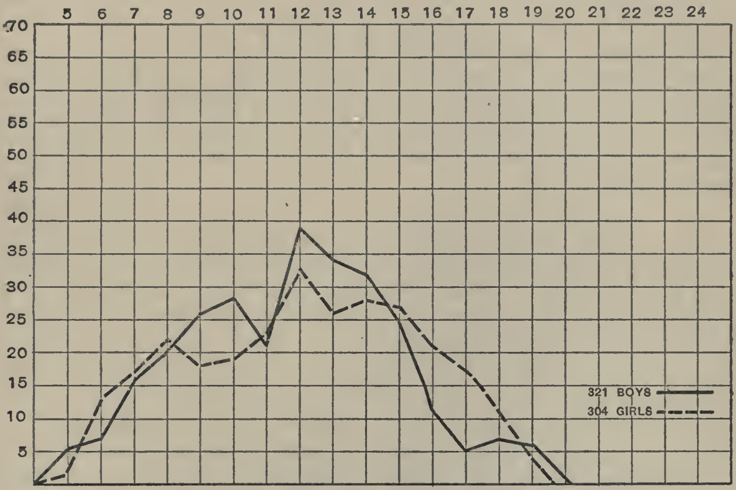
Out of 343 men who testified to teachers they disliked, 195 disliked men, and 148 disliked women.

Out of 313 women who testified to teachers they disliked, 158 disliked men, and 155 disliked women.

If we agree that positive dislike and hatred are evils, then it is safe to say that these testimonies indicate certain evil influences of teachers upon pupils. But aside from these feelings, which alone may be evil, there were very few cases in which one or more other evils were not given as a result of the same treatment that caused the hatred. Many left school, some for a term, some forever; many lost interest in their work; some became rebellious and indulged in conduct that resulted in very bad habits; some lost confidence in people and became more or less suspicious and pessimistic; some became nervous wrecks; some developed an irritable temper, and uncharitable judgment, etc. It is doing violence to no facts, then, to look upon this as a study of the evil influences of teachers upon pupils.

IV. The Age at the Time of Receiving these Evil Influences.

Out of the 343 men who testified to receiving evil influences there were 321 who gave their age at the time of receiving it. Of the 313 women who testified to evil influences, 304 gave their age at the time of receiving it. Of the men 4 indicated the evil as coming at 5 years of age; 6 at 6; 16 at 7; 20 at 8; and 26, 28, 25, 39, 34, 32, 32, 24, 11, 5, 7, 6, and 1 at the ages of 9 to 21 respectively. Of the women 1 indicated the evil as coming at the age of 5; 13 at the age of 6; 22 at 8; and 18, 19, 24, 33, 26, 28, 29, 21, 17, 11, and 6 at the ages of 9 to 19 respectively.



CURVE SHOWING AGE WHEN EVIL INFLUENCE CAME.

In testifying to the length of time during which these people were under the charge of the teacher they hated, the statements included periods that vary all the way from two weeks to five years. By far the greater number were under the teacher they referred to during one school year that varied in length from three months to ten months. Rather than attend school to such a teacher a second term, many either changed districts or quit entirely.

In testifying as to whether the evil influence were transient or permanent, only 218 men and 270 women answer the question.

Of the 218 men 137 say it was permanent, and 81 say it was transient.

Of the women 184 say it was permanent, and 86 say it was transient.

SUMMARY.

The numerous illustrative testimonials recorded above, tell their own suggestive story in such a way, that any words of comment would weaken their effect. The statistical tables are self-explanatory and must stand simply for what they are worth. It is hoped that the organization of all the facts is sufficiently close throughout the development of the thesis, to show their unity. The most important points which the study reveals are:

1. That the period of greatest susceptibility to influences for good is between the years of eleven and seventeen for girls, the maximum degree of susceptibility coming at fourteen; and between the years of twelve and nineteen for boys, the maximum degree of susceptibility for them coming at sixteen.

2. Five kinds of good are emphasized: (1) moral influences; (2) intellectual influences; (3) personal interest in the pupil, kindness, encouragement, sympathy, politeness, etc.; (4) self-reliance; (5) social graces. The moral influences predominate.

3. Three-fourths of the men and one-half of the women testify in favor of men teachers, although it is shown on pp. 508-509, that the chances for doing good seemed to be in favor of women teachers. The conditions that might bear upon this point are so very complex that it should be taken as a suggestion carefully to be investigated.

4. Most of those testifying were under the teacher that did them most good only one school year, and some for as short a period as seven or eight weeks. This emphasizes the fact that the good done by the teacher does not so much depend upon the length of time he has charge of the pupil, as upon the readiness of the pupil to receive the good. The teacher must be "on duty" all of the time, for he may not know when the *fullness of time* has come to any pupil.

5. Sixty-eight per cent. of the men and sixty-one per cent. of the women loved most the teacher who did them most good. It would seem to be an advantage for the teacher to be loved by his pupils.

6. There is much evidence running through the testimonies of a very intense longing by the pupil to be loved, noticed, praised or otherwise favorably recognized. Sometimes the expression of the longing is almost a pityful wail. The proper response by the teacher to this longing of the adolescent is exceedingly important.

7. Ninety-four per cent. of those testifying had had teachers whom they positively disliked or hated.

8. The testimonies under List II emphasize the fatal effects of the malevolent attitude of the teacher toward the pupil.

9. They further show that the period of greatest susceptibility to influences for the evil that comes from this malevolent attitude of the teacher comes earlier than the corresponding susceptibility to influences for good. Naturally, the instinct

of self-preservation shown in the rebellious reaction to the teacher's treatment, asserts itself before the instinct of self-seeking.

10. They further show that during this period of very great susceptibility, the ratio existing between some kinds of stimuli and their reaction is so great that a teacher may, in a moment of indiscretion, seriously, even fatally injure the pupil's entire future life.

A Word of Comment.

In conclusion, it may not be out of place to express some of the ideas and convictions that have forced themselves upon the writer during the progress of this study, and to show their bearing upon some common educational problems. Even though these ideas may be familiar, their restatement in this setting seems justifiable.

The fact that the period of greatest susceptibility to influences for good reaches its maximum at 14 for girls and at 16 for boys seems to me to be of very great pedagogical importance. Much of the pedagogy of the past has proceeded upon the idea that the period of early infancy, on account of the plasticity of child nature, is the most important time for his moral education,—for the formation of his character. The Jesuits taught that if they should have the boy till he was 8 years old, he would forever be a Jesuit. An eminent Catholic cardinal is reported to have said that if he should have the boy till the latter was 10 years old he didn't care who should have him afterward. This assertion by the cardinal is evidently based upon the conviction that the boy's character is substantially formed by the time he is 10. This is perhaps a very common view.

I do not wish to deny that the first ten years are very important in the formation of the child's character. But there is a question as to whether they are the *most* important. The many instances that every observer can cite, of children from the best of homes, who have been judiciously trained in the home, in the church and Sunday School, and by no means the least in our day schools, and yet have gone to the bad in later life, go to show that valuable as this early discipline is, it is by no means sufficient. On the other hand every one can give numerous instances of boys whose early environment and training were vicious in the extreme, and yet who have developed into noble manhood. This again would indicate that there may be a stronger factor for morality or immorality in the life of the boy than the discipline of his first ten years.

What moral education the child gets during its first years of childhood is in the content of the habits which he takes on.

The habits of the true home have the deepest moral content. The habits of the church, the Sunday School, the day school, are ethical to the core. In acquiring these habits, in conforming to the decorum of these institutions he is coming into possession of the best ethics that the race has worked out. But he does n't know about it, and does n't care. He is not interested in the moral aspect of things. He is interested in eating, sleeping, playing; in seeing, feeling, tasting, hearing, constructing, smashing, doing and undoing things. These things consume him. He does not know right and wrong *as such.* He knows what you *say* is right; what you *say* is wrong. He thinks what he is allowed to do is right, and what he is not allowed to do is wrong. He learns right by permission; wrong by prohibition. Meantime he is getting the drill in habits that have a moral content, and this may be his salvation in the later period when he begins to take charge of himself. But he is not ready yet to comprehend the ethical significance of the things about him, and of his own conduct, and therethrough to become morally self-directive.

Later, however, there does come a time when the child does become interested,—in fact engrossed in the moral aspect of things. This has a direct relation to the development of his self-consciousness. It comes at a time when the budding, growing, rapidly changing young manhood, young womanhood, begins to assert itself. The boy *feels* that his day is come, that he is becoming a man. The girl *feels* that she is becoming a woman. As a child the boy longingly looked forward to the time when he would be a man. But that was remote, and the being, different from him. Now he feels that it is here and he is becoming it. He is the first to recognize the birth of the new self, and this young manhood is loved, is nourished, protected, cradled and fostered as tenderly as the young mother cares for her first born. The love the adolescent has for his young unfolding self is no less intense than the mother-love, perhaps it is greater. The child is offspring, bone of her bone, flesh of her flesh, yet different. But this new born is he. He becomes interested in its welfare, wants it to become good and great. He is a hero worshipper, because he sees himself reflected only in heroes. He feels that he can incorporate every good and great quality into his own character. It is now, at this time, that the youth has his moral awakening and becomes interested in the formation of his own character. Everything now has a moral significance, and everything becomes related to him. He is really the center of the universe. Now, to him, is the fullness of time. A little good will go further for good, a little evil further for evil than at any other time in life. A new scale of values is used in re-estimating the world that begins to mean so much to him.

His reaction to stimuli changes;—the ratio between stimulus and reaction being all out of proportion to what has been, and what in maturity it will be. He is very sensitive to kindness, craves sympathy, and longs for merited praise. The young self can only thrive on favorable recognition. Kindness, politeness, encouragement, are sweet at any time in life, but never so much so as now. Sarcasm, ridicule, censure, blame, insult, are painful and depressing at any time, but never is their scar so ineffaceable as when received at this period. The greatest charm of adolescence is the promise that it contains. Personal interest, kindness, encouragement and politeness on the part of teachers and parents are powerful aids in the realization of that promise.

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BIBLIOGRAPHY OF CHILD STUDY

For the year 1899.

By Louis N. Wilson, Librarian, Clark University.

1. **Aars, K. P.** Der ästhetische Farbensinn bei Kindern. Zeits. f. päd. Psy., July, 1899. Vol. 1, pp. 173-179.

2. **Agahd, Konrad.** Die Erwerbsfähigkeit schulpflichtiger Kinder im Deutschen Reich. Zeits. f. Philos. u. Päd., 1899. Vol. 6, pp. 361-376.

   A detailed account, with tables, of the employment of the 214,954 children under 14 in the various industries of Germany.

3. **Albanel, Dr.** Étude sur les causes de progression de la criminalité des enfants. Jour. Soc. de Statist. de Paris, 1899. Vol. 40, pp. 94-99.

4. **Albanel et Legros** Les enfants menteurs. Semaine Méd., 1899. Vol. 14, clxii-clxiv.

5. **Alden, L. P.** Heredity versus environment. Char. Rev., N. Y., Apr., 1899. Vol. 9, pp. 85-87.

6. **Aldrich, C. A.** Head-nodding and head-rotation usually associated with nystagmus in very young children. Am. Jour. of Med. Sci., 1899. Vol. 117, pp. 158-168.

7. **Allin, Arthur** Social recapitulation. Ed. Rev., Nov., 1899. Vol. 18, pp. 344-352.

8. **Alterisio, Ilario** L'attenzione nei fanciulli delle scuole elementari. Note di psicologia scolastica. Paravia, Torino. 1899.

9. **Ament, Wilhelm** Die Entwicklung von Sprechen und Denken beim Kinde. E. Wunderlich, Leipzig, 1899, pp. 213.

   A characteristically German study of a girl's linguistic development, compared with that of several other children. Introduction on history of child study. Good author and subject indexes.

10. **de Amicis, Edmondo** Cuore, an Italian schoolboy's journal. A book for boys. Trans. from the 39th Italian ed., by Isabel F. Hapgood. T. Y. Crowell & Co., N. Y., 1895, pp. 326.

    One of the best books of its kind ever written. Character of the boys stands out in clear relief. Presents a most attractive and vivid picture of Italian school life.

11. **Anderson, W. G.** Studies in the effect of physical training. Am. Phys. Ed. Rev., Sept., 1899. Vol. 4, pp. 265-278.

12. **Andreae, C.** Zur Psychologie der Examina. Zeits. f. päd. Psy., May, 1899. Vol. 1, pp. 113-126.

13. **Armagnac, L.** De l'alimentation dans les internats et particulièrement à l'école normale. Rev. Pédagogique, Aug., 1899. Vol. 35, pp. 127-139.

A good review of Dr. LeGendre's pamphlet on "school dyspepsia."

14. **Arnold, Mary L. H.** Bacteriological study of school utensils. Ped. Sem., Sept., 1899. Vol. 6, pp. 382-385.

15. **Association Review.** Edited by Frank W. Booth, Mt. Airy, Phila., Oct. and Dec., 1899. Vol. 1.

An educational magazine published quarterly by the American Association to promote the teaching of speech to the deaf.

16. **Bailey Thomas P., Jr.** Character study in the kindergarten. Proc. N. E. A., 1899. pp. 541-547.

17. ——— Ethological psychology. Psy. Rev., Nov., 1899. Vol. 6, pp. 649-651.

18. **Balliet, T. M.** Some new aspects of educational thought. Proc. A. A. A. S., 1898. Vol. 48, pp. 481-488.

19. **Barnes, Earl** Methods of studying children. Paidologist, April, 1899. Vol. 1, pp. 2-17.

20. ——— Pour servir de préface. L'École Nouvelle [supplement], July 15, 1899. Vol. 2, pp. 377-378.

21. **Barr, Martin W.** Mental defectives and social welfare. Pop. Sci. Mo., April, 1899. Vol. 54, pp. 746-759.

22. ——— The how, the why, and the wherefore of the training of feeble-minded children. Jour. of Psycho-Asthenics, Sept., 1899. Vol. 4, pp. 204-212.

23. **Barthel, Dr.** Die Zerstreutheit geistig normaler Schüler. Samml. päd Vortr., 1899. Band 12, Heft 5, pp. 18.

24. **Beaufils, Edouard** Études de méthode : conditions générales de l'observation des enfants. L'École Nouvelle [supplement], Oct. 21, 1899. Vol. 2. pp. 9-11.

25. **v. Bechterew, W.** Suggestion und ihre sociale Bedeutung. George, Leipzig, 1899.

A very useful essay. See review in Centralblatt f. Nervenheilkunde, April, 1889. Vol. 22, pp. 250-252.

26. **Bell Sanford** Sex in secondary education. North Western Mo., May, 1899. Vol. 9, pp. 391-396.

27. **Belliol, Fernand** La curiosité à l'école. L'École Nouvelle. [Supplement]. July 15, 1899. Vol. 2, pp. 380-382.

28. **Benzoni, R.** Studi recenti di psicologia del bambino. Gio. Batta Carlini, Genova, 1898, pp. 37.

Emphasizes the need of studying the evolution of morality. Warns against losing the scientific spirit.

29. **Bergen, Mrs. Fanny D.** Animal and plant lore. Collected from the oral tradition of English-speaking folk. Edited and Annotated by Fanny D. Bergen. With Introduction by J. Y.

Bergen. (Memoirs of the American Folk-Lore Society, Vol. 7). Houghton, Mifflin & Co., Boston, 1899, pp. 180.

Contains a mass of data useful for comparative purposes.

30. **Berghold, K.** Schilderung der Spiele der Somâl-Jugend. Sitzungsber. der anthropol. Gesellsch. in Wien, 1899, pp. 39-41.

Treats of the games of the youth among the Somali of East Africa.

Bergström, John A. and Conradi, Edward Translation of Kotelmann's School Hygiene. (See No. 229.)

31. **Berkan, O.** Ueber den angeborenen und früh erworbenen Schwachsinn. Vieweg, Braunschweig, 1899, pp. 64.

32. **Bertola, G.** Il libro di testo nella scuola elementare al Congresso pedagogico di Torino: relazione, discussione e commenti. Môndovi, 1899.

A discussion of the *rôle* of the text-book in primary education—the result of the Turin Pedagogical Congress of 1898.

33. **Bethencourt-Ferreira, J.** La psychophysiologie des écoliers. Rev. de Psyc. Clin. et Thérap., 1899. Vol. 3, pp. 296-304.

34. **Von Bezold, Friedrich** Uber die Anfänge der Selbst-biographie und ihre Entwicklung im Mittelalter. Junge & Sohn, Erlangen. 1893, pp. 24.

A valuable contribution to the not very extensive literature of an important subject.

35. **Van Biervliet, J. J.** L'homme droit et l'homme gauche. Rev. Philosophique, Feb., Mar., Apr., 1899. Vol. 47, pp. 113-143; 276-296; 371-389.

Contains valuable data concerning the development of "right" and "left" at all periods of human life.

36. **Binet, A.** Note relative à l'influence du travail intellectuel sur la consommation du pain dans les écoles. Année Psychologique, 1898, Vol. 5, pp. 332-336.

37. **Blazek, B.** Ermüdungsmessungen mit dem Federæsthesiometer. Zeits. f. päd. Psy., Dec., 1899. Vol. 1, pp. 311-325.

38. **Blum, E.** La pédologie. Année Psychologique, 1898. Vol. 5, pp. 299-331.

Review of literature with reflections.

39. **Boardman, Charles A.** The fighting instinct. Association Outlook (Springfield, Mass.), Mar., 1899. Vol. 8, pp. 133-146.

40. **Boas, Franz** Some recent criticisms of physical anthropology. Am. Anthrop., Jan., 1899. n. s. Vol. 1, pp, 98-106.

Discussion of anthropometry good and bad by an expert.

41. **Boiadjieff, N.** La neurasthénie chez les enfants (Thèse, Fac. de Méd.). Bordeaux, 1899. pp. 87.

42. **Boisse, Louis** Société libre pour l'étude psychologique de l'enfant. Manuel Général de l'Instruction Primaire, Nov. 18, 1899, pp. 509-511.

An account of the French Child Study Association. (See also Buisson, No. 63.)

43. **Bolin, Jakob** On group contests. Am. Phys. Ed. Rev., March, 1899. Vol. 4, pp. 66-72.

44. **Bolton, F. E.** Scientific and practical child study: The province and the limitations of each. Wisconsin Jour. of Ed., May and June, 1899. Vol. 29, pp. 116-119; 138-141. Also in Child Study Mo., May, 1899. Vol. 5, pp. 7-24.

45. **Bondois, M.** L'étude de l'enfant et la pédagogie américaine. Manuel Général de l'Instruction Primaire, April 29, 1899. Vol. 35, pp. 178-180.

46. **Bonjean, G.** Enfants révoltés et parents coupables. Étude sur la désorganization de la famille et ses conséquences sociales. A. Colin et Cie, Paris, 1899. pp. 407.

A valuable contribution to the literature of criminological pedagogy.

47. **Bonnier, P.** Un procédé simple d'Acoumétrie. Arch. Int. de Laryng. et d'Otol, 1899. Vol. 12, pp. 131-133.

48. **Bourneville, Dr.** Création de classes spéciales pour les enfants arriérés. Paris, 1898.

Gives an account of special institutions for feeble-minded children in Switzerland, England, Belgium, etc., and argues for similar development in France.

49. **Bradford, E. H.** Variations in human gait. Med. Record, N. Y., July 8, 1899. Vol. 56, pp. 47-51.

50. **Bradley, John E.** Relation of play to character. Education, March, 1899. Vol. 19, pp. 406-412.

51. **Brown, Elmer E.** Art in education. Proc. N. E. A., 1899. pp. 112-121.

52. —— —— Naughty children. Proc. N. E. A., 1899. pp. 564-570.

53. **Browne, C. R.** Report of the work done in the anthropometric laboratory of Trinity College, Dublin, from 1891 to 1898. Proc. Roy. Irish Acad., Dublin, 1899. 3d s. Vol. 5, pp. 269-293.

54. **Browne, T. J.** Boys' gangs. Association Outlook (Springfield, Mass.), Feb., 1899. Vol. 8, pp. 96-107.

55. **Bruce, Belle S.** Parents' meetings. Ed. Rev., Sept., 1899. Vol. 18, pp. 185-188.

56. **Bryan, William L.** Child study. Appleton's Universal Cyclopædia. Vol. 2, pp. 614-616.

58. **Bryan, W. L. and Harter, Noble** Studies on the telegraphic language: acquisition of a hierarchy of habits. Psy. Rev., July, 1899. Vol. 6, pp. 346-375.

59. **Bücher, Karl** Arbeit und Rhythmus. 2te. Auflage. Leipzig, 1899. pp. 412.

A new edition of a valuable and suggestive work. Discusses the relations of labor and song among all peoples.

60. **Buchner, Edward F.** Attitudes towards child study. The Syracuse (N. Y.) Clinic, April and June, 1899. Vol. 2, pp. 40-42; 76-77.

61. **Buchner, Edward F.** New York society for child study. Rep. State Supt., N. Y., 1898. Vol. 2, pp. 882-887.

Reprints of this paper have been issued by the Society and may be had by addressing Professor Buchner at New York University, N. Y. City.

62. **Buisson, F.** Education de la volonté. Rev. Pédagogique, Oct., 1899. Vol. 35, pp. 310-345.

A comprehensive study of the will of the child from the standpoint of genetic psychology.

63. ——— Société libre d'études pédagogiques sur la psychologie de l'enfant. Manuel Général de l'Instruction Primaire. Paris, Nov. 4 et 18, 1899. pp. 477-478; 509-511.

The purposes of the society are to facilitate among its members the study of children, to publish results and to apply the same to the work of education.

64. **Bulkeley, J. E.** Social ethics in the schools. Forum, Jan., 1899. Vol. 26, pp. 615-620.

65. **Burk, Caroline Frear** Play: A study of kindergarten children. North Western Mo., Mar., Apr., 1899. Vol. 9, pp. 349-355.

66. **Burk, Frederick, and Caroline Frear** A study of the kindergarten problem. Whittaker & Ray Co., San Francisco, 1899. pp. 123.

A noteworthy treatment of the problem of early education. Valuable chapters: Neurological conditions of the kindergarten child; physical culture; play; language; music; love of nature; counting and number; moral training.

67. **Burk, Frederic** The kindergarten child physically. Proc. N. E. A., 1899. pp. 570-574.

68. ——— A curriculum of applied child study for the kindergarten and the primary school. Proc. N. E. A., 1899. pp. 1051-1057.

69. ——— The influence of exercise upon growth. Proc. N. E. A., 1899, pp. 1067-1076. Am. Phys. Ed. Rev., Dec., 1899. Vol. 4, pp. 340-349.

70. **Burkhard, Ph.** Die Fehler der Kinder. O. Nemnich, Karlsruhe, 1898, pp. 102.

71. **Burne-Jones, E.** Letters of Burne-Jones to a child. The Strand Magazine, May, 1899. Vol. 17, pp. 375-380.

72. **Burnham, W. H.** The child in education. Nation, N. Y., Jan. 26, 1899. Vol. 68, pp. 72-73.

73. ——— Mental hygiene. Appleton's Universal Cyclopædia, 1899. Vol. 8, pp. 601-604.

74. ——— School diseases. Appleton's Universal Cyclopædia, 1899. Vol. 10, pp. 631-634.

75. ——— School hygiene. Appleton's Universal Cyclopædia, 1899. Vol. 10, pp. 634-639.

76. **Butler, Nicholas Murray** Some criticisms of the kindergarten. Ed. Rev., Oct., 1899. Vol. 18, pp. 285-291.

77. **Butler, Nicholas Murray** Religious instruction in education. Ed. Rev., Dec., 1899. Vol. 18, pp. 425-436.

78. **Caldwell, W.** Social and ethical interpretations of mental development. Am. Jour. of Sociol., Sept., 1899. Vol. 5, pp. 182-192.

79. **Caley, Henry** (and others) A discussion on visual tests. Brit. Med. Jour., Sept. 23, 1899. Vol. 2, pp. 766-770.

80. **Camailhac, F.** Les enfants anormaux. Rev. Philanthropique, 1899. Vol. 5, pp. 182-189.

81. **Camerer, Wilhelm** Der Stoffwechsel des Kindes. Tübingen, 1896. pp. 160.

Treats of first and second years of childhood. A painstaking and scientific work, with many tables.

82. **Carroll, Clarence F.** Place of the kindergarten in the common school system. Jour. of Ped., May, 1899. Vol. 12, pp. 126-136.

83. **Carter, M. H.** Romanes's Idea of Mental Development. Am. Jour. of Psy., Oct., 1899. Vol. 11, pp. 101-118.

84. **Carus, Paul** A few hints on the treatment of children. The Monist, Jan., 1899. Vol. 9, pp. 234-247.

85. —— —— Santa Claus. Open Court, Jan., 1899. Vol. 13, pp. 45-50.

86. —— —— Rationalism in the nursery. Open Court, Feb., 1899. Vol. 13, pp. 98-109.

87. —— —— The moral education of children. Open Court, March, 1899. Vol. 13, pp. 176-184.

Treats of Imagination and love of truth; Wordly prudence; Square dealing; Sympathy with animals.

88. —— —— Parenthood. Open Court, April, 1899. Vol. 13, pp. 211-214.

89. —— —— Playful instruction, and genius. Open Court, Sept., 1899. Vol. 13, pp. 566-570.

90. —— —— The significance of naming things in the nursery. Open Court, Nov., 1899. Vol. 13, pp. 669-672.

91. —— —— Anticipate the School. Suggestions for the treatment of children. Open Court, Dec., 1899. Vol. 13, pp. 747-757.

Treats of Counting; Natural science; Foreign languages; Mathematics.

92. **Cattell, J. McK.** New anthropometric methods. Proc. A. A. A. S., 1898. Vol. 48, pp. 357-358.

93. **Chabot, M. C.** Une enquête pédagogique dans les écoles primaires de Lyon. Rev. Pédagogique, April, 1899. Vol. 34, pp. 329-332.

A study of the interests of children in elementary school subjects. See review in Ped. Sem., Sept., 1899. Vol. 5, pp. 412-413.

94. —— —— Les variations de l'attention à l'école primaire. Rev. Pédagogique, Oct., 1899. Vol. 35, pp. 346-351.

95. **Chamberlain, A. F.** Three shapers of childhood's genius—society, opportunity, travel. North Western Mo., June, 1899. Vol. 9, pp. 439-443.

Treats of the conditions favorable to the preservation of the genius of childhood.

96. ——— The "child type." Ped. Sem., Dec., 1899. Vol. 6, pp. 471-484.

A brief attempt to state the place of the child in the physical and social evolution of man.

97. **Child-labor laws** and factory laws. Rep. U. S. Comm. of Ed., 1897-98. Vol. 2, pp. 1698-1700.

98. **Child Study.** Published monthly by the Kyo-iku-Ken-Kyu-Sho. Tokyo, Japan.

Published in Japanese. First-class in every respect. Price, 76 cents a year. See review in Ped. Sem., March, 1899, and July, 1900. Vol. 6, pp. 254-255. Vol. 7, pp. 290-294.

99. **Chrisman, Oscar** Pubescent period. Education, Feb., 1899. Vol. 19, pp. 342-347.

100. ——— Child and teacher. Jour. of Ped., May, 1899. Vol. 12, pp. 112-125.

101. **Christian, J.** De la démence précoce des jeunes gens. Ann. Méd.-Psychol., 1899. Vol. 9, pp. 43-65; 200-216; 420-436. Vol. 10, pp. 5-23; 177-188.

102. **Clark, Kate Upson** Bringing up boys. T. Y. Crowell & Co., N. Y., 1899. pp. 227.

103. **Clouston, T. S.** What the brain has to do in youth besides getting educated. Paidologist, April, 1899. Vol. 1, pp. 17-23.

104. **Cohn, H.** Die Sehleistungen von 50,000 Breslauer Schulkindern. Schottlander, Breslau, 1899.

Valuable on account of comparisons with results obtained some years before in the same city.

105. **Cohn, J.** Was kann die Psychologie von den Pädagogen lernen? Zeits. f. päd. Psy., Jan. 1899. Vol. 1, pp. 20-27.

106. **Colegrove, F. W.** Individual memories. Am. Jour. of Psy., Jan., 1899. Vol. 10, pp. 228-257.

Conradi, Edward See Kotelmann (No. 229).

107. **Cook, Francis E** Relation of the kindergarten to primary education. Trans. Ill. Soc. for Child Study, April-July, 1899. Vol. 4, pp. 41-55.

108. **Cramer, A.** Ueber die ausserhalb der Schule liegenden Ursachen der Nervosität der Kinder (Samml. v. Abh. a. d. Geb. d. Pädag. Psychol. u. Physiol., II, 5 Heft). Reuther und Reichard, Berlin, 1899. pp. 28.

Author thinks the influence of the school in producing nervousness has been overestimated. Early home conditions (abnormal) count for much.

109. **Croswell, T. R.** Amusements of Worcester school children. Ped. Sem., Sept., 1899. Vol. 6, pp. 314-371.

110. **Culin, Stewart** Hawaiian games. Am. Anthropologist, April, 1899, N. S. Vol. 1, pp. 201-247.

Very useful for comparative purposes. Notes many games of children.

111. **Dana, John Cotton** Children's reading. Rep. U. S. Comm. of Ed., 1897-98. Vol. 1, pp. 680-684.

112. ——— Public libraries and public schools. Proc. N. E. A., 1899. pp. 452-529.

A masterly report. Treats of the reading of children.

113. **Danger, O.** Helen Keller die Taubblinde. Die Kinderfehler, Jan., Mar. and May, 1899. Vol. 4, pp. 1-9, 49-57, 81-90.

114. **Daudé, G.** Douleurs osseuses de croissance. (Thèse, Fac. de Méd.). Montpellier, 1899, pp. 43.

115. **Davidson, S. G.** Relation of language teaching to mental development and of speech to language teaching. Assn. Rev., Dec., 1899. Vol. 1, pp. 139-149.

116. **Delmas, N.** De la paralysie générale des adolescents. (Thèse, Fac. de Méd.). Bordeaux, 1899, pp. 152.

117. **Demolins, Edmond** L'éducation nouvelle. L'école des Roches. Librairie de Paris, Paris, 1899, pp. 320.

A most interesting study of a new educational movement and its realization in an institution of learning. See Ped. Sem., Vol. 7, pp. 479-491.

118. **Demoor, Jean** Les enfants anormaux et la criminologie. Rev. de l'Univ. de Bruxelles. April, 1899. Vol. 4, pp. 481-498.

Dr. Demoor is head of the special school in Brussels. Argues on behalf of special schools for epileptic, hysterical, and choreic children.

119. **Dendy, Mary** Individuality of the child. Ed. Rev. (London), April, 1899. Vol. 1, pp. 225-230.

120. ——— Importance of permanence in the care of the feebleminded. Ed. Rev. (London), Sept., 1899. Vol. 1, pp. 574-580.

121. **Dewey, John** Principles of mental development as illustrated in early infancy. Trans. Ill. Soc. for Child-Study, Oct., 1899 Vol. 4, pp. 65-83.

122. ——— The school and society. Supplemented by a statement of the University elementary school. The Univ. of Chicago Press. Chicago, 1899, pp. 125.

123. **Dexter, Edwin G.** The mental effects of the weather. Science, Aug. 11, 1899. N. S. Vol. 10, pp. 176-179. See also note by H. Helm Clayton. *Ibid.*, p. 378.

124. ——— Conduct and the weather. (Psy. Rev. Monograph Suppl., No. 10.) The Macmillan Co., N. Y., 1899. pp. 105.

125. ——— Influence of the weather upon crime. Pop. Sci. Mo., Sept., 1899. Vol. 55, pp. 653-659.

126. **Dinsmore, J. W.** Vices of childhood and youth. North Western Mo., Oct., 1899. Vol. 10, pp. 74-80.

127. **Dinsmore, J. W.** Some problems of the Sunday School. North Western Mo., Dec., 1899. Vol. 10, pp. 149-151. Also Proc. N. E. A., 1899. pp. 594-600.

128. **Douglas, A. R.** The improvable imbecile; his training and future. Jour. Mental Sci., Jan., 1899. Vol. 45, pp. 1-6.

129. **Dowdall, H. C.** Liverpool by-laws regulating juvenile street trading. Econ. Rev., Oct., 1899. Vol. 9, p. 50.

130. **Down, R. Langdon** A boy's imagination in play. Paidologist, April and June, 1899. Vol. 1, pp. 38-42; 94-100.

—— —— See also No. 201.

131. **Dresslar, F. B.** Genetic psychology. North Western Mo., March-April, 1899. Vol. 9, pp. 355-358.

132. —— —— Chinese pedagogics in practice. Education, Boston, Nov., 1899. Vol. 20, pp. 136-143.

133. **Drouot Edouard** Du rôle de l'instituteur des enfants anormaux. Rev. int. de Péd. comparative, April, 1899. Vol. 1, pp. 78-100.

134. **Drummond, W. B.** On the early training of blind children. Pediatrics, 1899. Vol. 7, pp. 533-538.

135. **Du Bois, Patterson** Beckonings from little hands. Eight studies in child life. John D. Wattles & Co., Phila., 1894. pp. 182.

136. —— —— The point of contact in teaching. A plea for the little children. John D. Wattles & Co., Phila., 1896. pp. 88.
Valuable for Sunday School teachers.

137. **Dutton, S. T.** Social phases of education. The Macmillan Co., N. Y., 1899. pp. 259.

138. **Dyche, William** Co-education: Some comparisons between boys and girls. Ed. Rev. (London), March, 1899. Vol. 1, pp. 173-178.

139. **Earle, Alice Morse** Child life in colonial days. The Macmillan Co., N. Y., 1899. pp. 418.
Contains interesting details of babyhood, children's dress, school life, discipline, manners, religious training, precocity, diaries, etc.

140. **Edmund, Gertrude** Child study in normal and training schools. Proc. N. E. A., 1899. pp. 1032-1038.

141. **Educational Review** A magazine of the science and art of education and review of current educational literature and events. Edited by William K. Hill, London.
Published monthly since Jan., 1899, at 5 shillings a year. Child study has not been neglected, and the editor gives excellent résumés of periodical literature.

142. **Ellis, Havelock** Evolution of modesty. Psy. Rev., March, 1899. Vol. 6, pp. 134-145.
An unprejudiced study with historical aperçu.

143. **Elsenhaus, Th.** Ueber individuelle und Gattungsanlagen. Zeits. f. päd. Psy., Sept. and Dec., 1899. Vol. 1, pp. 233-244; 334-342.

144. **Engelmann, Geo. J.** The health of the American girl as imperilled by the social conditions of the day. (Reprint from Trans. So. Surg. and Gyn. Assoc., 1890.) W. J. Dornan, Phila., 1891. pp. 29.

145. **Escorne, C.** De l'excitation cérébrale chez les enfants. (Thèse, Fac. de Méd.) Jouve, Paris, 1898. pp. 68.

146. **Féré, Ch.** L'instinct sexuel, évolution et dissolution. F. Alcan, Paris, 1899. pp. 346.

The best chapters are those devoted to sexual education and hygiene.

147. **Fernald, Walter E.** Quelques-unes des méthodes employées pour les soins et l'éducation des enfants les plus idiots. Rev. Int. de Péd. comparative, May, 1899. Vol. 1, pp. 148-154.

148. **Ferriani, L.** Nel mondo dell'infanzia. Cogliati, Milano, 1899.

149. **Field, A. G.** On the injury resulting to the eyes and vision of school children from want of proper regulation of light in the schoolroom; also proposed method of estimating the relative intensity of light for sanitary purposes. Proc. A. A. A. S., 1898. Vol. 48, pp. 479-480.

150. **Findlay, M. E.** An hour's study of girls' games in London. Paidologist, Nov., 1899. Vol. 1, pp. 158-160.

151. **Fitz, George W.** Hygiene of instruction in elementary schools. Jour. of Ped., Jan., 1899. Vol. 12, pp. 69-73.

152. ——— Bed posture as an etiological factor in spinal curvature. Am. Phys. Ed. Rev., June, 1899. Vol. 4, pp. 136-138.

153. ——— Conditions and needs of physical training. Proc. N. E. A., 1899, pp. 1065-1067. Am. Phys. Ed. Rev., Dec., 1899. Vol. 4, pp. 337-339.

154. **Flatau, G.** Ueber psychische Abnormitäten bei an Veitstanz leidenden Schulkindern. Zeits. f. päd. Psy., March, 1899. Vol. 1, pp. 85-88.

155. **de Fleury, Maurice** Le corps et l'âme de l'enfant. Armand Colin & Cie., Paris, 1899. pp. 341.

A characteristically verbose French book.

156. **Folks, Homer** The care of destitute, neglected and delinquent children. Char. Rev. Nov. and Dec., 1899. Vol. 9, pp. 392-407; 459-470.

157. **Forbush, William B.** A manual of boys' clubs. Warren, Mass., 1898. pp. 31.

158. **du Fougeray, Hamon** Pédagogie anormale; Etat actuel de l'enseignement spécial aux enfants anormaux en France. Rev. Int. de Péd. Comparative, March, 1899. Vol. 1, pp. 6-18.

159. **du Fougeray, Hamon** De l'enseignement du chant aux enfants sourd-muets. Rev. Int. Péd. Comparative, July, 1899. Vol. 1, pp. 260-283.

France, C. J. See Kline, L. W. and France, C. J.

160. **Francke, C.** Sprachenentwicklung der Kinder und der Menschheit. Rein's Encyclop. Handb. der Pädag., Langensalza, 1895-1899. Vol. 6, pp. 751-795. Also: Reprint, pp. 48.
Very useful. Has good bibliography.

161. **Fraser, John.** Initiation among the Australian blacks. Am. Antiquarian, Chicago, July and Aug., 1899. Vol. 21, pp. 233-235.

162. **Fuchs, A.** Schwachsinnige Kinder, ihre sittliche und intellektuelle Rettung. C. Bertelsmann, Gütersloh, 1899. pp. 248.

163. **Garrod, Herbert B.** Co-education of boys and girls. Ed. Rev. (London), Jan., 1899. Vol. 1, pp. 37-47.

164. **Gellé, M. E.** L'audition et ses organes. F. Alcan, Paris, 1899. pp. 326.

165. **Germann, G. B.** On the invalidity of the æsthesiometric method as a measure of mental fatigue. Psy. Rev., Nov., 1899. Vol. 6, pp. 599-605.

166. **Giry. N.** Du rôle du médecin dans les écoles. Nancy, 1899. pp. 47.

167. **Graefe, A.** Das Sehen der Schielenden. Bergmann, Wiesbaden, 1899.

168. **Griffith, George** Course of reading for children. Ed. Rev., Jan., 1899. Vol. 17, pp. 65-69.
A well graded course of reading for children in grades 2 to 9 inclusive.

169. **Griffith, J. P. Crozer.** The care of the baby; a manual for mothers and nurses. W. B. Saunders, Phila., 1899. pp. 404.
Written by a clinical professor. A reliable book on the care of young children in sickness and in health.

170. **Grimm, Ludwig** Ueber die Bedeutung der Gebrüder Grimm in der Geschichte der Pädagogik. Zeits. f. d. deutschen Unterricht, 1899. Vol. 13, pp. 585-605; 641-671.
A sympathetic and critical estimate of the famous Grimm brothers.

171. **Groos, Karl** Die Spiele der Menschen. G. Fischer, Jena, 1899. pp. 538.
The theory of play is treated from the standpoints of psychology, biology, physiology, pedagogy, etc. A most valuable and suggestive book. Should be read by every student of the child.

172. **Groszmann, M. P. E.** Der Drang nach Gewissheit. Die Kinderfehler, July and Sept., 1899. Vol. 4, pp. 137-140; 157-164.

173. —— —— Criminality in children. Arena, Oct. and Nov., 1899. Vol. 22, pp. 509-525; 644-652.

174. **Gulick, Luther** Psychological, pedagogical, and religious aspects of group games. Ped. Sem., March, 1899. Vol. 6, pp. 135-151.

175. **Gutberlet, C.** Zur Psychologie des Kindes. Philos. Jahrb., 1899. Vol. 12, pp. 365-381.

Good review of recent literature in Child Study.

176. **Gutzmann, Hermann** Die Sprachlaute des Kindes und der Naturvölker. Zeits. f. päd. Psy., Jan., 1899. Vol. 1, pp. 28-40.

One of the few attempts to treat the subject upon a scientific basis.

177. —— —— Traitement diététique des troubles nerveux de la parole. Rev. Int. de Péd. Comparative, May, 1899. Vol. 1, pp. 132-140.

178. **Hague, J. Cecil** Athletics and fatigue. Jour. of Ed. (London), Feb. 1899. N. S. Vol. 21, pp. 104-106.

179. **Hall, G. Stanley** The methods, status and prospects of the child study of to-day. Trans. Ill. Soc. for Child Study, May, 1896. Vol. 2, pp. 178-191.

180. —— —— Heirs of the ages. Proc. of the N. J. Ass'n for the Study of Children and Youth, Newark, N. J., Mar. 11, 1899. The Brotherhood Press, Bloomfield, N. J., 1899. pp. 5-14.

181. —— —— Résumé of child study. North Western Mo., Mar., Apr., 1899. Vol. 9, pp. 347-349. Also as "Introductory Words" in the Paidologist, April, 1899. Vol. 1, pp. 5-8.

182. —— —— The education of the heart. (Abstract.) Kindergarten Mag., May, 1899. Vol. 11, pp. 592-595.

183. —— —— From fundamental to accessory in education. Kindergarten Mag., May, 1899. Vol. 11, pp. 599-600.

184. —— —— Needed modifications in the theory and practice of the kindergarten. Kindergarten Mag., May, 1899. Vol. 11, pp. 604-607.

185. —— —— The kindergarten. School and Home Ed., June, 1899. Vol. 18, pp. 507-509.

186. —— —— A study of anger. Am. Jour. of Psy., July, 1899. Vol. 10, pp. 516-591.

187. —— —— The line of educational advance. Outlook, Aug. 5, 1899. Vol. 62, pp. 768-770.

188. —— —— Note on early memories. Ped. Sem., Dec., 1899. Vol. 6, pp. 485-512.

189. **du Hamel, E.** De l'alcoolisme chez l'enfant. (Thèse, Fac. de Méd), Paris, 1899. pp. 118.

190. **Hanna D., and Spore, N. A.** Effect of college work on the health of women. Am. Phys. Ed. Rev., Sept., 1899. Vol. 4, pp. 279-280.

191. **Harrison, Elizabeth** The language of the body. Trans. Ill. Soc. for Child Study, Oct., 1899. Vol. 4, pp. 92-94.

192. **Hastings, William W.** A brief résumé of Quetelet's treatise on man. Am. Phys. Ed. Rev., March, Sept. and Dec., 1899. Vol. 4, pp. 56-55; 309-318; 366-376.

Gives in brief form the contents of one of the classical works on the study of man, now rather antiquated.

193. —— —— Anthropometric studies in Nebraska. Proc. N. E. A., 1899, pp. 1076-1084.

194. **Hawkins, Cecil** The physical measurements of public school boys. Jour. of Ed. (London), Jan. and March, 1899. N. S. Vol. 21, pp. 33-35; 187-190.

195. **Hemprich, K.** Die Kinderpsychologie und ihre Bedeutung für Unterricht und Erziehung. Dessau, 1899.

196. **Henri, V.** Influence du travail intellectuel sur les échanges nutritifs. Année Psychologique, 1898. Vol. 3, pp. 179-189.

197. **Herbertson, Mrs.** The beginning of childhood; notes on the first half of the third year. Paidologist, June, 1899. Vol. 1, pp. 83-93.

198. **Hirschlaff, Leo** Die angebliche Bedeutung des Hypnotismus für die Pädagogik. Zeits. f. päd. Psy., May, 1899. Vol. 1, pp. 127-132.

Warns against the use of hypnotism, with its "mystic" associations, in normal pedagogy.

199. **Hodge, C. F.** Foundations of nature study. I. Ped. Sem., Dec., 1899. Vol. 6, pp. 536-553.

200. **Holman, Henry** Imitativeness in school children. Paidologist, April, 1899. Vol. 1, pp. 24-37.

Results of a statistical study.

201. **Holman Henry and J. Langdon-Down** Practical child study; the baby—how to observe, understand, and train him. London, 1899. pp. 35.

Some practical directions for the study of young children. Especially valuable for mothers.

202. **Howard Francis E.** The child-voice in singing, treated from a physiological and a practical standpoint, and especially adapted to schools and boy choirs. Novello, Ewer & Co., N. Y., 1898. pp. 138.

A convenient digest of voice physiology.

203. **Hrdlicka, Ales.** Abnormalities of the teeth and their positions. Jour. of Psycho-Asthenics, June, 1899. Vol. 4, pp. 153-190.

204. **Hugh, D. D.** The animism of children. North Western Mo., June and Oct., 1899. Vol. 9, pp. 450-453. Vol. 10, pp. 71-74.

205. **Hull, S. E.** Education the restorer of vocal speech to the deaf. Child Life, Oct., 1899. Vol. 1, pp. 211-214.

206. **Huther, A.** Die psychologische Grundlage des Unterrichts. Berlin, 1889. pp. 83.

207. **Ilberg, G.** Das Jugendirresein (Hebephrenie und Katatonie). Samml. Klin. Vortr. (N. F., No. 224), 1898. Vol. 8, pp. 1287-1308.
Detailed discussion. A good *résumé* of the subject.

207A. **Jahrbuch** für Volks- und Jugendspiele. Achter Jahrgang, 1899. Herausgegeben von E. von Schenckendorff u. Dr. med. F. U. Schmidt. Voigtländer, Leipzig, 1899.
Contains many useful articles (medical, hygienic, critical, historical) concerning the various aspects of popular games and plays of children.

208. **James, William** Talks to teachers on psychology, and to students on some of life's ideals. Henry Holt & Co., N. Y., 1899. pp. 301.
Contains chapters on habit, interest, attention, memory.

209. **Jastrow, Joseph** Practical aspects of psychology. Ed. Rev., Feb., 1899. Vol. 17, pp. 135-153.
Discusses the utility of child study.

210. **Jegi, J. J.** Children's ambitions. Trans. Ill. Soc. for Child Study. Chicago, 1899. Vol. 3, pp. 131-144.

211. **Johnson, E. R.** Value of nature study in sense training. Jour. of Psycho-Asthenics, Sept., 1899. Vol. 4, pp. 213-217.

212. **Johnson, George E.** An educational experiment. Ped. Sem., Dec., 1899. Vol. 6, pp. 513-522.
Describes the work of the Andover, Mass., Play School. A school for boys ranging from 10 to 14 years.

213. —— —— General principles of school management and instruction. Report of the Supt. of Schools for the year 1899. Andover, Mass. pp. 8-35.
A model superintendent's report.

214. **Johnson, Walter B.** Defective vision of school children. Ed. Rev., June, 1899. Vol. 18, pp. 15-22.

215. **Johnson, W. S.** Researches in practice and habit. Studies from Yale Psy. Lab., 1898. Vol. 6, pp. 51-103.

216. **Joteyko, J.** Revue générale sur la fatigue musculaire. Année Psychologique, 1898. Vol. 5, pp. 1-54.

217. **Judd, Charles H.** Psychology and the individual teacher. Jour. of Ped., May, 1899. Vol. 12, pp. 136-148.

218. **Kafemann, R.** Die Erkrankungen der Sprechstimme, ihre Ursachen u. Behandlung, nebst einer kurzen Hygiene für Lehrer, Geistliche, Advokaten u. Offiziere. A. W. Kafemann, Danzig, 1899. pp. 48.
A primer of the more important points that bear upon the hygiene of the speaking voice.

219. **Kaler, A.** Contribution à l'étude de l'hystérie chez les enfants (Thèse, Fac. de Méd.). Nancy, 1899. pp. 88.

220. **Kelsey, Carl** Proposed child legislation in Illinois. Char. Rev., Jan., 1899. Vol. 8, pp. 511-513.

221. **Kemsies, Ferdinand** Fragen und Aufgaben der Pädagogischen Psychologie. Zeits. f. Päd. Psy., Jan., 1899. Vol. 1, pp. 1-20.

222. —— —— Die häusliche Arbeitszeit meiner Schüler. Zeits. Päd. Psy., March, May and July, 1899. Vol. 1, pp. 89-95; 132-134; 192-196.

223. **Kirkpatrick, E. A.** Promising line of child study for parents. Trans. Ill. Soc. for child study, Jan., 1899. Vol. 3, pp. 179-182.

Suggestions for the study of children's vocabularies.

224. —— —— Children's reading, II, III, North Western Mo., Jan. 2, March, April, 1899. Vol. 9, pp. 229-233; 338-342.

225. —— —— Development of voluntary movement. Psy. Rev., May, 1899. Vol. 6, pp. 275-281.

Gives results of children learning to walk.

226. **Kline, L. W. and France, C. J.** The psychology of ownership. Ped. Sem., Dec., 1899. Vol. 6, pp. 421-470.

227. **Kooistra, J.** Sittliche Erziehung. E. Wunderlich, Leipzig, 1899. pp. 100.

Treats of rewards, punishments, honor, education of girls, etc. Ought to be translated into English.

228. **Kőrösi, Joseph** An estimate of the degrees of legitimate natality as derived from a table of natality compiled by the author from his observations made at Budapest. Phil. Trans. Rev. Soc., London (B), 1895. Vol. 186, Part 2, pp. 781-875.

Treats in great detail the age conditions of fecundity for married couples.

229. **Kotelmann, Ludwig** School hygiene. Translated by John A. Bergström and Edward Conradi. Bardeen, Syracuse, N. Y., 1900. pp. 391.

Important material added since the German edition was published in 1895. A valuable book.

230. **Kratz, H. E.** How may fatigue in the schoolroom be reduced to the minimum? Proc. N. E. A., 1899. pp. 1090-1096. Am. Phys. Ed. Rev., Dec., 1899. Vol. 4, pp. 358-364.

231. **Krohn, William O.** Physical growth periods and appropriate physical exercises. Forum, June, 1899. Vol. 27, pp. 445-451.

232. **Kuhn, Maurice** Études méthode. L'École Nouvelle [supplement], July 15, 1899. Vol. 2, pp. 378-380.

Methods of studying children.

233. —— —— La Science de l'éducation L'École Nouvelle [supplement], July 15, 1899. Vol. 2, pp. 750-753.

An excellent statement of the aims and purposes of child study.

234. **Kupferschmid, Adalbert** Ueber das Muskelgefühl bei Schwachsinnigen. Die Kinderfehler, July and Sept., 1899. Vol. 4, pp. 113-123; 145-157.

235. **Laisant, M.** Mathematics for children. Pop. Sci. Mo., Oct., 1899. Vol. 55, pp. 800-811.

236. **Laloy, L.** Die Stellung des Menschen in der Tierwelt mit besonderer Berücksichtigung der neueren Entdeckungen im Gebiete der Gehirnphysiologie. Ztschr. f. Morphol. u. Anthropol., 1899. Vol. 1, pp. 313-324.

Differences between human reason and animal instinct are of degree not of kind. Man is not somatically separate from the rest of the animal world. A very good paper.

237. **Lancaster, E. G.** The adolescent at home and in school. Proc. N. E. A., 1899. pp. 1039-1043.

238. **Lange, K.** Ueber Apperception. Eine psychologische-pädagogische Monographie. 6 Aufl. R. Voigtländer, Leipzig, 1899.

A new edition of a familiar classic.

239. **Larguier des Bancels, J.** Essai de comparaison sur les différentes méthodes proposées pour la mesure de la fatigue intellectuelle. Année Psychologique, 1898. Vol. 5, pp. 190-201.

240. **Lawrence, Isabel** Children's interests in literature. Proc. N. E. A., 1899. pp. 1044-1051.

241. **Le Dantec, F.** Le mécanisme de l'imitation. Rev. Philosophique, Oct., 1899. Vol. 48, pp. 337-382.

242. L'éducation physique. Rev. Encyclop., 1899. Vol. 9, pp. 681-764 (Numéro spécial).

243. **Ledyard, Mary F.** Relation of imitation to originality and consequent freedom. Proc. of N. E. A., 1899. pp. 547-551.

244. **Le Gendre, Paul** La dyspépsie chez les collégiens. Rev. pratique d'obstétrique et de pédiatrie, Oct., 1898. Vol. 11, pp. 300-328.

An interesting and valuable study of the alimentation of school children (male and female) between the ages of seven and eighteen. The author reaches the conclusion that digestive troubles are more common with children and adolescents than is ordinarily believed, and also more common at school.

245. **Letourneau, C.** L'évolution mentale chez les animaux. Rev. de l'école d'anthrop. de Paris, 1899. Vol. 9, pp. 137-152.

246. **Leuba, J. H.** On the validity of the Griesbach method of determining fatigue. Psy. Rev., Nov., 1899. Vol. 6, pp. 573-598.

247. **Ley, A. et Sano. F.** De la pédologie. Jour. de Neurol., 1899. Vol. 4, pp. 161-164.

248. **Lichtenberger, H.** Richard Wagner. Der Dichter und Denker. C. Reissner, Dresden, 1899. pp. 571.

Gives an account of Wagner's childhood and youth, his first opera, experience in Paris, etc.

249. **Lindner, Gustav** Aus dem Naturgarten der Kindersprache. Ein Beitrag zur kindlichen Sprach- und Geistesentwickelung in den ersten vier Lebensjahren. L. Fernan, Leipzig, 1898. pp. 122.

Treats of the stages of development of the language of his own children during the first year. A very interesting little book.

250. **Little, E. Graham** The causation of night terrors. Pediatrics, 1899. Vol. 8, pp. 357-362. Brit. Med. Jour., Aug. 19, 1899. Vol. 2, pp. 464-465.

251. **Lobsien, M.** Aufgaben, Quellen und Methoden der Kinderforschung. Deutsche Schule, Berlin, 1899. Vol. 3, pp. 97-

252. **Locke, Josephine E.** Æsthetic occupations. Trans. Ill. Soc. for Child Study, Jan., 1899. Vol. 3, pp. 183-195.

253. **Lombroso, Paola** La evoluzione delle idee nei bambini. Riv. di Sci. Biologiche, Torino, Italy, Aug.-Sept., 1899. Vol. 1, pp. 641-664.

254. **Luckey, G. W. A.** The development of moral character. Proc. N. E. A., 1899. pp. 127-136.

255. **Lukens, Herman T.** The Joseph story. Illustrated by children. Teacher's Mag., N. Y. City, April, 1899. Vol. 1, pp. 331-334.

256. ——— Mental fatigue. Am. Phys. Ed. Rev., March and June, 1899. Vol. 4, pp. 19-29 and 121-135.

An admirable summary with fatigue results; also good bibliography.

257. ——— Drawing in the early years. Proc. N. E. A., 1899. pp. 945-951.

258. **Lynch, Hannah** Autobiography of a child. Wm. Blackwood and Sons, Edinburgh and London, 1899. pp. 299.

Written in an interesting style. Of some value on several child study topics.

259. **Lyttelton, E.** Instruction of the young in sexual knowledge. Int. Jour. of Ethics, July, 1899. Vol. 9, pp. 452-466.

260. **MacDonald, Arthur** Ueber Körpermessungen an Kinder. Deuts. Zeits. f. Ausländischen Unterricht, July, 1899. Vol. 4, pp. 253-266.

A study of the growth of school children in Washington, D. C.

261. ——— Observations et expériences psycho-physiologiques sur les enfants. Rev. Scientifique, July 15, 1899. Vol. 12, pp. 70-73.

262. ——— Experimental study of children, including anthropometrical and psycho-physical measurements of Washington school children. Rep. U. S. Comm. of Ed., 1897-98. Vol. 1, pp. 985-1204.

263. ——— Child study in the United States. Rep. U. S. Comm. of Ed., 1897-98. Vol. 2, pp. 1281-1390.

264. ——— Colored children: A psychological study. Jour. Am. Med. Ass'n, 1899. Vol 32, p. 14.

265. **McGee, W. J.** The beginning of mathematics. Am. Anthrop., Oct., 1899. N. S., Vol. 1, pp. 646-674.

266. **Maitland, Louise** Notes on Eskimo drawings. North Western Mo., June, 1899. Vol. 9, pp. 443-450.

Compares Eskimo (adult and child) drawings with those of other children.

267. **Makowsky, A.** Mannbarkeitsgebräuche bei den Kaffern. Globus, Braunschweig, 1899. Vol. 75, p. 230.

268. **Makuen, G. Hudson** Falsetto voice in the male. Report of five cases. Reprint from Jour. of Am. Med. Ass'n, March 4, 1899. Chicago, 1899. pp. 7.

268A. **de Manacéine, Marie** Sleep: Its physiology, pathology, hygiene, and psychology. Chas. Scribner's Sons, N. Y. (Cont. Sci. Ser.), 1897. pp. 341.

A subject of great importance and one too often neglected by parents.

269. **Manheimer, Marcel** Le troubles mentaux de l'enfance. Précis de psychiatrie infantile avec les applications pédagogiques et médico-légales. Preface de M. le Professeur Toffroy. Société d'Editions Scientifiques, Paris, 1899. pp. 188.

A good book. Rich in data and bibliography.

270. **Mapes, C. C.** More about the ethics of adolescence. N. Y. Med. Jour., June 4, 1898. Vol. 67, pp. 794-795.

Refers to articles on *Age of Consent* which appeared in the same journal, Feb. 25 and Aug. 10, 1896, and May 14, 1898.

271. **Marion, Henri** Les mouvements de l'enfant au premier âge; premiers progrès de la volonté. Rev. Scientifique, June 21, 1890. Vol. 45, pp. 769-777.

272. **Mark, H. T.** An outline of the history of educational theories in England. Swan Sonnenschein & Co., London, 1899. pp. 139.

Short chapters on physical, practical, and moral education in England.

273. **Marro, Antoine** Le rôle sociale de la puberté. Rev. Philosophique, June, 1899. Vol. 47, pp. 606-631.

274. ——— Influence of the puberal development upon the moral character of children of both sexes. Amer. Jour. of Sociol., Sept., 1899. Vol. 5, pp. 193-219.

275. **Martin, E. S.** Children. Harp. Mag., Dec., 1899. Vol. 100, pp. 7-17.

276. **Matthews, W.** The study of ethics among the lower races. Jour. Amer. Folk-Lore, 1899. Vol. 12, pp. 1-9.

Treats of lying, stealing, etc.

277. **Melza, C.** Antropologia pedagogica. Arona; Tipografia economica, 1899. pp. 246.

Gives an account of "Pedagogical anthropology" (child study) in Italy. Also discusses the education of the sexes. A valuable and suggestive book by a teacher and educational reformer.

278. **Messer, August** Die Wirksamkeit der Apperception in den persönlichen Beziehungen des Schullebens. Berlin, 1899. pp. 69.

279. **Meurice, J.** Les fugues chez les enfants. (Thèse, Fac. de Méd.). Jouve, Paris, 1899. pp. 60.

280. **Meyer, Max** Die Tonpsychologie, ihre bisherige Entwicklung und ihre Bedeutung für die musikalische Pädagogik. Zeits. f. Päd. Psy., March, July and Sept., 1899. Vol. 1, pp. 74-85; 180-189; 245-254.

281. **Mitter, Peary C.** The spoilt child. A tale of Hindu domestic life. Translated by G. D. Oswell. Thacker, Sprink & Co., Calcutta, 1893. pp. 234.

An interesting picture of a Hindu child made bad by faulty education, but finally reformed.

282. **Möbius, P. J.** Ueber J. J. Rousseau's Jugend. Beitr. z. Kinderforschung. Heft 2. Langensalza, 1899. pp. 29.

An interesting study of Rousseau's early life by one of the most distinguished European alienists.

283. **Monroe, Will S.** Individual child study. Jour. of Ped., Jan., 1899. Vol. 12, pp. 46-68.

284. ——— The money sense of children. Ped. Sem., March, 1899. Vol. 6, pp. 152-158.

285. ——— Les enfants dégénéres dans les écoles publiques. Rev. Int. de Péd. comparative, March, 1899. Vol. 1, pp. 2-6.

286. ——— Education des enfants idiots en Californie. Rev. Int. de Péd. comparative, April, 1899. Vol. 1, pp. 63-70.

287. ——— Play interests of children. Trans. Ill. Soc. for Child Study, April-July, 1899. Vol. 4, pp. 1-9. Also published in Proc. N. E. A., 1899. pp. 358-364; and in the Am. Phys. Ed. Rev., Dec., 1899. Vol. 4, pp. 358-365.

A statistical study of the favorite games and counting-out rhymes of 2,050 Massachusetts school children.

288. ——— La chorée dans les écoles publiques d'enfants. Rev. Int. de Péd. comparative, June, 1899. Vol. 1, pp. 195-208.

289. ——— Fatigue among school children. Proc. N. E. A., 1899. pp. 90-93.

290. ——— Status of child study in Europe. Ped. Sem., Sept., 1899. Vol. 6, pp. 372-381.

291. ——— Das Studium defekter Kinder in Amerika. Die Kinderfehler, Nov., 1899. Vol. 4, pp. 183-188.

Summarizes briefly the American studies on the eyesight, hearing and mental ability of school children.

292. ——— Child study outlines. Third series. Study of defective children. Wright and Potter Printing Co., Boston, 1899.

A series of eight outlines covering the following subjects: 1. Mental deficient children; 2. Hearing of school children; 3. Eyesight of school children; 4. Truants and juvenile delinquents; 5. Nervousness of school children; 6. Functional neuroses among school children; 7. Spinal curvature and locomotor ataxia; 8. Defective speech, stammering and stuttering.

293. ——— Die Entwickelung des sozialen Bewusstseins der Kinder: Studie zur Psychologie und Pädagogik der Kinder. Berlin, 1899. pp. 88.

Chapters: 1. Origin of the social sense (in animals, primitive man, and the child). 2. Reactions to the social environment (companions, occupations, and societies). 3. Social utility of play (toys and games). 4. Social content of school instruction (singing, history, and geography). 5. Social aspects of proprietary notions (money sense and thrift, rights and altruism). 6. Discipline as a social factor (esprit de corps, class responsibility and punishments). 7. Social suggestibility of emotional states (fears and superstitions).

294. **Montaigne, Michel de** The education of children. Selected, translated and annotated by L. E. Rector. Int. Ed. Ser. D. Appleton & Co., N. Y., 1899. pp. 191.

295. **Montgomery, C.** The religious element in the formation of character. Proc. N. E. A., 1899. pp. 121-127.

296. **Montheil, E.** L'équitation, ses effets physiologiques, psychiques et pédagogiques. (Thèse, Fac. de Méd.). Bordeaux, 1899. pp. 97.

297. **Moon, S. B.** Growth at puberty. Am. Phys. Ed. Rev., Sept., 1899. Vol. 4, pp. 294-298.

298. **Morey-Errant, Derexa** The unity of the periods of growth in man. Trans. Ill. Soc. for Child Study, Oct., 1899. Vol. 4, pp. 84-91.

299. **Morgan, C. Lloyd** Our double acrostic. Paidologist, April and June, 1899. Vol. 1, pp. 43-52; 78-93.

An able discussion of the aims of child study and the means by which those aims may be attained.

300. ——— Psychology for teachers. Ed. Rev. (London), June, 1899. Vol. 1, pp. 360-366.

301. **Morrison, W. D.** Physische Einflüsse auf das jugendliche Verbrecherthum. Naturw. Wochenschr. Berlin, 1899. Vol. 14, pp. 13-20.

302. ——— Einfluss der Eltern auf die jugendlichen Uebelthäter. Naturw. Wochenschr. Berlin, 1899. Vol. 14, pp. 69-74.

303. **Moses, Julius** Pathologie der kindlichen Schüchternheit. Die Kinderfehler, Nov., 1899. Vol. 4, pp. 177-182.

304. **Mosher, Eliza M.** Hygenic desks for school children (illustrated). Ed. Rev., June, 1899. Vol. 18, pp. 9-14.

305. **Muffang, H.** Écoliers et étudiants de Liverpool. Anthropologie, Paris, 1899. Vol. 10, pp. 21-41.

Gives results of numerous anthropometric investigations.

306. **Muthesius, K.** Kindheit und Volkstum. Beitr. z. Lehrerbildung u. Lehrerfortbildung, Heft 13. Thienemann, Gotha, 1899. pp. 54.

Discusses the literature and phenomena of folk-life as bearing upon child-life.

307. **Nacla, Vicomtesse** L'enfant. Toutes ses éducations. Flammarion, Paris, 1899. pp. 203.

Has a chapter on physical and another on moral defects.

308. **Natorp, P.** Herbart, Pestalozzi und die heutigen Aufgaben der Erziehungslehre. F. Frommann, Stuttgart, 1899. pp. 151.

See paper on above by W. Rein in Zeits. f. Philos. u. Päd., 1889. Vol. 6, pp. 296-315.

309. ——— Socialpädagogik. F. Fromman, Stuttgart, 1899. pp. 352.

310. **Netsch, A.** Spielbuch für Mädchen im Alter von 6-16 Jahren. Mit einem Vorworte von Schulrat Professor Dr. Euler. Carl Meyer, Hannover and Berlin, 1899. pp. 291.

Describes 240 games for girls, with brief bibliography.

311. **Nüsse, H.** Die Schreibstütze. Zeits. f. Päd. Psy., July, 1899. Vol. 1, pp. 189-192.

312. **Olhert, Arnold** Das Studium der Sprachen und die geistige Bildung. Berlin, 1899. pp. 50.

313. **Olivier, P.** Le bégarément dans la littérature médicale. La Parole, 1899. Vol. 9, pp. 721-745.

314. **O'Shea, M. V.** Some practical phases of mental fatigue. Pop. Sci. Mo., Aug., 1899. Vol. 55, pp. 511-524.

315. —— —— Conservation of mental energy. Jour. of Ped., Dec., 1899. Vol. 12, pp. 195-230.

316. **Oliphant, James** The relations of the sexes. Int. Jour. of Ethics, April, 1899. Vol. 9, pp. 273-296.

A plea for coeducation and personal purity.

317. **Oppenheim, H.** Nervenleiden und Erziehung. Vortrag, gehalten im psychologischen Verein zu Berlin am 20. Juli, 1899. S. Karger, Berlin, 1899.

Epitomizes the chief things about nervous affections. Ought to be read by teachers and parents.

318. **Ottolenghi, S.** Il tatuaggio nei minorenni corrigendi. Arch. di psichiatr., Torino, 1899. Vol. 20, pp. 157-163. Also: Riv. di med. leg., Milano, 1899. Vol. 2, pp. 347-350.

319. **Paidologist:** organ of the British child study association. Edited by Miss Mary Louch, Chiltenham, England, April, June, and Nov., 1899.

A well edited child study journal published three times a year.

320. **Papillault, G.** Quelques lois touchant la croissance et la beauté du visage humain. Rev. Scientifique, July 29, 1899. 4 s., Vol. 12, pp. 129-138. Also: Bull Soc. d'Anthr. de Paris, 1899. pp. 220-241.

A very interesting and valuable study. Treats of the influence of the social and "extra-organic" factors in the development of the form and beauty of the human face.

321. —— —— Ontogénèse et phylogénèse du crâne humain. Rev. de l'École d'anthropol. de Paris, 1899. Vol. 9, pp. 105-133.

Discusses the origin and development of the skull with man and with the animals beneath him.

322. **Pappenheim, Karl** Bemerkungen über Kinderzeichnungen. Zeits. päd. Psy., March, 1899. Vol. 1, pp. 57-73.

323. **Parsons, F. C.** Childhood's three ages. Journal of Education, 1899. Vol. 21, pp. 686-688.

324. **Partridge, George E.** Report of the tests of the vision and hearing of the school children of Worcester. Report of the Worcester (Mass.) schools, 1899. pp. 68-79.

325. **Patrick, G. T. W.** Should children under ten learn to read and write? Pop. Sci. Mo., Jan., 1899. Vol. 54, pp. 382-392.

A good presentation of the case against premature instruction.

326. —— —— Analysis of perceptions of taste. Univ. of Iowa Studies in Psychology. Vol. 2, pp. 85-127.

327. —— —— Some peculiarities of the secondary personality. Univ. of Iowa Studies in Psychology. Vol. 2, pp. 128-152.

328. **Pauper Children** An open letter on the care and control of London pauper children, addressed to the Rt. Hon. Viscount Peel. P. S. King & Son, London, 1897. pp. 30.

329. **Payot, Jules** L'éducation du caractère. Rev. Philosophique, Dec., 1889. Vol. 48, pp. 594-614.

330. **Perrone-Capano, R.** Infanticidio ed esposizione d'infante negli animali inferiori e nei popoli selvaggi. Riv. mens. di psichiatr. forense, Napoli, 1899. Vol. 2, pp. 1-15.

A very useful statement of the facts concerning infanticide and the exposure of offspring among the lower animals and among savage peoples.

331. **Perry, Charles S.** Training period of deaf as compared with hearing youth. Ass'n Rev., Dec., 1899. Vol. 1, pp. 150-157.

332. **Petit, Edouard** La fête de l'adolescence. Rev. Pédagogique, Sept., 1899. Vol. 35, pp. 193-210.

An interesting account of the "adolescence festival" at Paris, July 30, 1899—founded with the idea of "creating a holiday for adolescents."

333. **Pfitzner, F.** Social-anthropologische Studien. I. Der Einfluss des Lebensalters auf die anthropologischen Charaktere. Ztschr. f. Morphol. u. Anthropol., Stuttgart, 1899. Vol. 1, pp. 325-377.

The first portion of an elaborate study of the relations between the periods of life and the anthropological characters of man.

334. **Phillips, D. E.** Some aspects of the child study movement. North Western Mo., Jan., 1899. Vol. 9, pp. 233-237.

335. —— —— The teaching instinct. Ped. Sem., March, 1899. Vol. 6, pp. 188-245.

336. **Pidancet, J.** Le travail intellectuel dans ses relations avec la thermogénèse. Nancy, 1899. pp. 87.

337. **Plettenberg, P.** Die neuesten Abhandlungen und Untersuchungen über die Ermüdung der Schuljugend. Ztschr. f. Hypnot., 1899. Vol. 8, pp. 228-249.

338. **Proceedings** of the seventh annual meeting of the American Psychological Association, New York, Dec., 1898. Psy. Rev., Mar., 1899. Vol. 6, pp. 146-179.

339. **Proceedings** of the New Jersey association for the study of children and youth. The Brotherhood Press, Bloomfield, N. J., 1899. pp. 68.

Contains eleven articles and reports. A valuable pamphlet and a good *vade mecum* for those interested in organizing such institutions.

340. **Quick, R. H.** Life and remains. Edited by F. Storr. The Macmillan Co., N. Y., 1899. pp. 544.

Contains chapters on public schools, boys and masters, child nature, language, memory, religious beliefs, etc.

341. **Rayner, H.** The early recognition and treatment of mental defects in children. Medical Mag., 1899. Vol. 8, pp. 451-461; 591-600.

Rector, L. E. See Montaigne. (No. 294.)

342. **Reis, J.** Ueber einfache psychologische Versuche an Gesunden und Geisteskranken. Psy. Arbeiten, 1899. Vol. 2, pp. 587-694.

343. **Report** of the educational commission of the city of Chicago. Chicago, 1899. pp. 248.

Contains chapters on public kindergartens, vacation schools and school playgrounds, parental schools, pupil government, etc.

344. **Report** of the state superintendent of public instruction in New York. (44th.) For the school year ending July 31, 1897. State Printers, N. Y. and Albany, 1898. 2 vols., pp. 1304. With appendix, pp. 228.

Pp. 873-913 devoted to child study. Contains the following papers: Report on child study, by Anna K. Eggleston—New York Society for Child Study; and scientific child study, by Edward F. Buchner. The relation of the home and the school in child study, by Mrs. M. H. McElroy. Child study for the practical teacher, by L. H. Galbreath. Child study in the high school, by John G. Allen. The dullard, by James P. Haney. Child study by a woman's club, by Mrs. Ella Hastings.

345. **Revue** Internationale de Pédagogie Comparative. Auguste Mailloux, Rédacteur en chef. Nantes, France.

Begun in March, 1899. Price, 10 francs a year. Published in the interests of defective children. See review of first issue in Ped. Sem., Sept, 1899. Vol. 5, p. 411.

346. **Ribot, Th.** The general ideas of infants and deaf-mutes. Open Court, March, 1899. Vol. 13, pp. 164-175.

347. ——— The evolution of speech. Open Court, May, 1899. Vol. 13, pp. 267-278.

348. ——— Abstraction prior to speech. Open Court, Jan., 1899. Vol. 13, pp. 14-20.

349. ——— The higher forms of abstraction—their nature. Open Court, July, 1899. Vol. 13, pp. 433-443.

350. ——— Intermediate forms of abstraction. Open Court, June, 1899. Vol. 13, pp. 349-359.

351. ——— The evolution of general ideas. (Auth. transl. by F. A. Welby), Chicago and London, 1899. pp. 231.

352. **Richmond, Ennis** Through boyhood to manhood. Longmans, Green & Co., London and N. Y., 1899. pp. 194.

A plea for unselfishness, self-control, and purity.

353. **Rider, Edward C.** Kindergarten work in schools for the deaf. Ass'n Rev., Oct., 1899. Vol. 1, pp. 35-41.

354. **Rohleder, Hermann** Die Masturbation. Eine Monographie f. Ärzte u. Pädagogen. Fischer's medicin. Buchh., Berlin, 1899. pp. 319.

355. **Roussey, C.** Notes sur l'apprentissage de la parole chez un enfant. La Parole, 1899. Vol. 9, pp. 791-799; 870-880.

356. **Roux, Joanny** Psychologie de l'instinct sexuel. J. B. Baillière & fils, Paris, 1899. pp. 96.

357. **Rowe, Stuart H.** The physical nature of the child and how to study it. The Macmillan Co., New York, 1899. pp. 207.

Chapters: Sight; hearing; motor ability; enunciation; nervousness; fatigue; disease; posture; movements; growth and adolescence.

358. **Ruyssen, Th.** L'École et le crime. Manuel Général de l'Instruction Primaire, June 3, 1899. pp. 237-239.

Study of juvenile delinquents.

359. **Rzesnitzek, Emil** Zur Frage der psychischen Entwickelung der Kindersprache. G. P. Aderholz, Breslau, 1899. pp. 35.

360. **Sante de Sanctis, —.** I sogni: studi psicologici e clinici. Bocca, Turin, 1899. pp. 388.

Perhaps the best book on dreams we have. Chapter IV treats of children's dreams. Dreams of animals and of adults are also discussed.

361. **Schaefer, F.** Schule und Arbeit. I. Wie erzieht die Schule zur Arbeitsfreudigkeit? II. Gegen den Handfertigkeitsunterricht in den Schulen. Mayer, Leipzig, 1898. pp. 90.

362. **Schiller, H.** Die Schularztfrage. Ein Wort zur Verständigung. Reuther und Reichard, Berlin, 1899. pp. 56.

Hopes more from the hygienic education of the teacher than from the institution of the school physician.

363. **Schröter, Dr.** Wird bei jungen Unverheirateten zur Zeit der Menstruation stärkere sexuelle Erregtheit beobachtet? Allg. Ztschr. f. Psychiatr., 1899. Vol. 56, pp. 321-334.

364. **Schwendt, A.** Examen clinique et acoustique de 60 sourds-muets. La Parole, 1899. Vol. 9, pp. 641-672.

365. —— —— Les restes auditifs des sourds-muets peuvent-ils être utilisés pour leur apprendre à mieux parler? La Parole, 1899. Vol. 9, pp. 845-869.

366. **Schwendt, A., und Wagner, —** Untersuchungen von Taubstummen. B. Schwabe, Basel, 1899. pp. 187.

367. **Sciascia, P.** La psicogenesi dell' instinto e della morale secondo C. Darwin. Palermo, 1899. pp. 190.

368. **Scott, Jas. Foster** The sexual instinct: Its use and dangers as affecting heredity and morals. E. B. Treat & Co., 1899.

369. **Sears, Charles H.** Home and school punishments. Ped. Sem., March, 1899. Vol. 6, pp. 159-187.

370. **Seashore, C. E.** Motor ability, reaction, time, rhythm, and time sense. Univ. of Iowa Studies in Psychology. Vol. 2, pp. 64-84.

371. **Shinn, Milicent W.** Notes on the development of a child. Parts 3-4. Univ. of Cal. Studies, pub. by the Univ., Berkeley, Cal., 1899. pp. 179-424.

372. **Shuttleworth, George E.** Exceptional children. Paidologist, Nov., 1899. Vol. 1, pp. 138-144.

373. **Sicchirollo, Angelo** Psicologia infantile popolare. A. Vallardi, Milano, 1899.

374. **Siviter, Anna P.** Fears of childhood discovered by a mother. Kindergarten Mag., Oct., 1899. Vol. 12, pp. 82-87.

375. **Skinner, Charles R.** See Report of the State Supt. of Pub. Instruction, N. Y. No. 344.

376. **Spahr, Charles B.** Child labor in England and the United States. Chautauquan, Oct., 1899. Vol. 30, pp. 41-43.

377. **Spencer, Frank C.** Education of the Pueblo child. A study in arrested development. Columbia Univ. Contrib. to Philos. Psy. and Ed., Vol. 7, No. 1. The Macmillan Co., N.Y., 1899. pp. 97.

A valuable contribution to the study of the problems involved in individual and racial development.

378. **Spicer, —** Elementary schools (children working for wages). Eyre & Spottiswoode, London, 1899. Parts I and II, pp. 51-110.

Parliamentary report on children attending school and working for wages in England and Wales.

379. **Spitzner, Alfred** Psychogene Störungen der Schulkinder. Ein Kapitel der pädagogischen Pathologie. E. Ungleich, Leipzig, 1899. pp. 45.

Contains suggestions on overcoming psychic and nervous abnormalities in children.

380. **Stableton, J. K.** The study of boys entering the adolescent period of life. IX. The boy developed by business training. North Western Mo., March-April, 1899. Vol. 9, pp. 342-344.

381. **Stanley, Hiram M.** Professor Gross and theories of play. Psy. Rev., Jan., 1899. Vol. 6, pp. 86-92.

382. ——— Education and individuality. Ed. Rev., June, 1899. Vol. 18, pp. 80-84.

383. **Starbuck, E. D.** Child study and its possibilities as a science. North Western Mo., March-April, 1899. Vol. 9, pp. 358-362.

384. ——— The psychology of religion. (Contemporary Science Series.) Scribner's Sons, N. Y., 1899. pp. 420.

Attempts to bring conversion and other stages of religious development into line with the biological facts of life.

385. **State** care of dependent children. Ann. Amer. Acad. Pop. Soc. Sci., Sept., 1899. Vol. 14, pp. 120-123.

386. **Steffens, C.** Die Indianerpuppensammlung von Frau A. L. Dickerman. Globus, Braunschweig, 1899. Vol. 75, pp. 354-356.

387. **Stevens, Kate** Lessons from the standpoint of the child. Child Life, July and Oct., 1899. Vol. 1, pp. 160-162; 231-236.

A statistical study of the interests of children in the subjects taught in elementary schools.

388. **Stickney, Lucia** Homes of our down-town children. Proc. N. E. A., 1899. pp. 388-395.

389. **Stimpfl, Joseph** Die Pflege der Kinderpsychologie in Nordamerika. Blätter für die Schulpraxis in Volksschulen und Lehrerbildungs-anstalten, 1899. Vol. 10, pp. 24.

A comprehensive study of the child study movement in America.

390. —— —— Stand der Kinderpsychologie in Europa und Amerika. Zeits. f. Päd. Psy., Dec., 1899. Vol. 1, pp. 344-361.

A comprehensive study of the present status of child study.

391. —— —— Translation of Tracy's psychology of childhood. (See No. 412.)

392. **Stockham, Alice B.** Games in education. School and Home Ed., Bloomington, Ill., Dec., 1899. Vol. 19, pp. 187-189.

Storr, F. (Editor.) See **Quick, R. H.** (No. 340.)

393. **Strauss, P.** Enfants maltraités et jeunes délinquants. Rev. Philanthr., 1899. Vol. 5, pp. 298-304.

394. **Street, J. Richard** A genetic study of immortality. Ped. Sem., Sept., 1899. Vol. 6, pp. 267-313.

395. **von Strümpell, L.** Die Pädagogische Pathologie oder die Lehrer von den Fehlern der Kinder. 3. Aufl. Hrsg. von Alf. Spitzner. E. Ungleich, Leipzig, 1899.

396. **Sully, James** Dollatry. Contemp. Rev., Jan., 1899. Vol. 75, pp. 58-72.

397. **Swift, Edgar J.** Some causes of reflex neuroses in children. Am. Phys. Ed. Rev., March, 1899. Vol. 4, pp. 34-41.

398. **Taylor, Charlotte** The series method: A comparison. Pop. Sci. Mo., Feb., 1899. Vol. 54, pp. 537-541.

399. **Thiemich, M.** Ueber die Diagnose der Imbecillität im frühen Kindesalter. Deutsche Medic. Wochenschr., 1900. Nr. 2, p. 34.

Discusses the symptoms of imbecility noticeable as abnormalities in the second and third years of life.

400. **Thomas, Félix** L'enseignement visuel. Rev. Pédagogique, Dec., 1899. Vol. 35, pp. 481-497.

401. **Thomas, P. F.** Morale et éducation. Alcan, Paris, 1899. pp. 171.

402. —— —— L'éducation des sentiments. Alcan, Paris, 1899. pp. 287.

403. **Thorndike, Edward** Mental fatigue. Science, May 19, 1899. N. S., Vol. 9, pp. 712-713.

404. **Thulié, H.** Éducation des dégénérés supérieurs. Réflexe de l'obéissance. Rev. Mensuelle de L'École d'Anthrop. de Paris, Jan., 1899. Vol. 9, pp. 1-16.

Emphasizes the hygiene of movement.

405. **Thurber, Charles H.** Plans for the development of child study in the State through the State department. Trans. Ill. Soc. for Child Study, Jan., 1899. Vol. 3, pp. 195-198.

406. ——— Child study in the Sunday school. Bib. World, July, 1899. Vol. 14, pp. 42-46.

407. ——— Little critics. Trans. Ill. Soc. for Child Study, Oct., 1899. Vol. 4, pp. 95-99.

408. **Tissier, P.** De l'influence de l'accouchement anormal sur le développement des troubles cérébraux de l'enfant. (Thèse, Fac. de Méd.) Steinheil, Paris, 1899. pp. 100.

409. **Toischer, W.** Die Sprache der Kinder. (Samml. gemeinnütz., Vortr. 248.) F. Haerpfer in Komm., Prag., 1899.

410. **Toulouse and Vaschide** Mesure de l'odorat chez les enfants. C. R. Soc. de Biol., 1899, 11th Ser. Vol. 1, pp. 381-387; 487-489.

411. **Tracy, Frederick** Left-handedness. Paidologist, June, 1899. Vol. 1, pp. 100-106.

412. ——— Psychologie der Kindheit. Mit Erlaubnis des Verfassers nach der vierten neubearbeiteten Auflage des Originals aus dem Englischen übertragen von Dr. J. Stimpfl. Mit 28 Abbildungen im Text. E. Wunderlich, Leipzig, 1899. pp. 158.

A good translation minus the bibliography given in the English edition.

413. **Troublesome Child** in School (The) Proceedings of the Kansas Society for Child Study. Child Study Mo., Feb., 1899. Vol. 4, pp. 451-488.

A section of the Kansas State Teachers' Association devoted to the discussion of this subject. Rather chatty.

414. **Trüper, J.** Bemerkungen zu den Verhandlungen der IX. Konferenz für das Erziehungswesen der Schwachsinnigen. Die Kinderfehler, Jan. and March, 1899. Vol. 4, pp. 21-28; 57-68.

415. **Valentine, Maude** Two studies of school children. Trans. Ill. Soc. for Child Study. April-July, 1899. Vol. 4, pp. 56-61.

416. **Van Liew, C. C.** Mental and moral development of the kindergarten child. Proc. N. E. A., 1899. pp. 551-559.

417. ——— Racial traits in the group activity of children. North Western Mo., Sept., 1899. Vol. 10, pp. 34-38. Also Proc. N. E. A., 1899. pp. 1057-1064.

418. **de Varigny, Henry** Croissance. Dictionnaire de physiologie, 1899. Vol. 4, pp. 488-545.

Discusses the question of growth from all points of view. A good *résumé* of the subject.

419. **Viali, F.** L'enseignement moral à l'école primaire. Challamel, Paris, 1898.

420. **von Voss, G.** Ueber die Schwankungen der geistigen Arbeitsleistung. Psy. Arbeiten, 1898, Vol. 2, pp. 399-449.

421. **Vostrovsky, Clara** A study of children's reading tastes. Ped. Sem., Dec., 1899. Vol. 6, pp. 523-535.

422. **Ward, A. O.** The vision of school children. Brit. Med. Jour., 1899, I, p. 443.

423. **Warner, Charles Dudley** The making of criminals. Arena, Jan., 1899. Vol. 21, pp. 15-28.

424. **Warner, Francis** Mental abilities and disabilities of children. Lancet, 1899. I, pp. 1137-1138.

425. —— —— The nervous system of the child. Its growth and health in education. The Macmillan Co., N. Y., 1909. pp. 233.

426. **Warren, H. C., and others** The Psychological Index for 1898. The Macmillan Co., N. Y., 1899. pp. 173.

427. **Warwick, Countess of** (Editor.) Progress in women's education in the British empire. Being the report of the education section, Victorian Era Exhibition, 1897. Longmans, Green & Co., London and N. Y., 1898. pp. 370.

Under education of children are papers on the pauper child; teaching of defective children, and the children's guild of play.

428. **Washburn, M. F.** Recent discussions of imitation. Philos. Rev., Jan., 1899. Vol. 8, pp. 101-104.

429. **Wegener, H.** Die Spiegelschrift. Zeits. f. Päd. Psy., Sept., 1899. Vol. 1, pp. 254-269.

430. **Weir, James, Jr.** The dawn of reason, or mental traits in the lower animals. The Macmillan Co., N. Y., 1899. pp. 234.

Welby, F. A. See No. 351.

431. **Welsh, Charles** The early history of children's books in New England. New Eng. Mag., April, 1899. N. S., Vol. 20, pp. 147-160.

432. **Weygandt, W.** Römer's Versuche über Nahrungsaufnahme und geistige Leistungsfähigkeit. Psy. Arbeiten, 1899. Vol. 2, pp. 695-706.

433. **Williams, Lillie A.** How to collect data for studies in genetic psychology. Ped. Sem., June, 1896. Vol. 3, pp. 419-423.

Miss Williams has probably collected more child study data by the syllabus method than any other teacher.

434. **Wilson, Louis N.** Bibliography of child study for the year 1898. Ped. Sem., Sept., 1899. Vol. 6, pp. 386-410.

435. **Wiltse, Sara E.** Children's autobiographies. Paidologist, Nov., 1899. Vol. 1, pp. 155-157.

436. **Winterburn, Florence Hull** From the child's standpoint. Views of child life and nature. A book for parents and teachers. The Baker & Taylor Co., N. Y., 1899. pp. 278.

Brief papers from popular journals. Interesting, but of little scientific value.

437. **Wolf, O.** Die Hörprüfung mittelst der Sprache. Zeits. f. Ohrenheilk., 1899. Vol. 34, pp. 289-311.

438. **Woodworth, R. S.** The best movement for handwriting. Science, Nov. 10, 1899. N. S. Vol. 10, pp. 679-681.

439. **Wright, Carroll D.** Outlines of practical sociology. Longmans, Green & Co., N. Y., 1899. pp. 431.

Parts III, IV, V, deal with population, family, and labor.

440. **Zeitschrift** für Pädagogische Psychologie. Herausgegeben von Ferdinand Kemsies. Herman Walther, Berlin.

Begun in Jan., 1899. Price 8 marks a year. See review of the first number in Ped. Sem., March, 1899. Vol. 5, p. 255.

441. **Zucke, A.** Ueber Schuld und Strafe der Jugendlichen Verbrecher. Stuttgart, 1899. pp. 127.

Argues against punishment by fines and for a reduction of the age for punishment.

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CURRENT EUROPEAN EDUCATIONAL THOUGHT.

By ALEXANDER F. CHAMBERLAIN.

In the pages following an attempt is made to indicate briefly for each country of Europe (exclusive of the British Isles and Turkey), the pregnant word or striking reform under whose influence the twentieth century will begin its course. The admonitions and recommendations, laws and regulations, proposals and prophecies résuméd here give the gist of much of the best educational thought now occupying the attention of the school authorities of the continent, and of the scholars outside these, who are potent in shaping the destinies of their respective countries. There has been no attempt to tell everything that has happened in educational circles and the special developments in the larger countries of such commonly and everywhere active questions as the university education of women, the status of classical studies, etc., have not been detailed, the aim being to give some really striking point of advance or retreat, that might be taken to sound the note for the coming era, or, in the case of the small countries, to summarize their most recent educational activities. These notes are intended as a brief *aperçu* of some of the liveliest topics with the consideration of which the new age must begin.

GERMANY. Considering the signs of the times, the last three years of the nineteenth century have heard no more seasonable or more fitting word than the message contained in Dr. W. Rein's[1] masterly exposure of the dangerous threatening education from the excessive development of militarism, since the peril here strikes at the very roots of learning itself. Militarism and education are opposite terms; they designate fields each peculiar in itself and needing freedom from the encroachments of the other, and each having something to dispose of for the benefit of the other. But to subordinate education to militarism is to abandon its highest and holiest ideal. The watchword of education is to make men more human, of militarism to make men fit for war,—this contrast no sophistry can cloud, no "patriotism" eliminate. The union of militarism, with its deification of authority and its subordination of conscience and will, is the death of the individuality for whose development alone education has its true *raison d'être*. The "unnatural marriage between militarism and the school" has already carried with it serious injuries to the cause of education. The relations between military service and gymnasial instruction; the imitation in the school of the parade and glitter of militarism and the false appreciation of military education by the teachers who are often all-too-ready to transport some of its evils into the schoolroom; the evils already wrought by drill and its petty accompaniments; the invasion of the schools by text books, etc., written for cadets,—these and many other things indicate how far the spirit of militarism has gone, directly and indirectly, towards destroying the best things of the school.

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[1] Militarismus und Schulerziehung. *Encycl. Handb. der Pädag.*, Vol. IV (1897), pp. 771-774. See also: *Revue Pédagogique*, Vol. XXXIV (1900), pp. 279 ff.

Moreover, the school runs no little danger of being turned into a barrack. The old gymnasia, with their 90 or 100 scholars have almost passed away and their places have been taken by huge colossi in the very mass of whose multitude the individual is swamped, and the vices of the many made powerful to contaminate the virtues of the few. The "barrack system" is the worst possible in education, but it is beloved of militarism. The need of the age is to stem the tide of militarism by every possible means. Militarism implies generalizing upon barbaric impulses, education individualization for reasons of culture and progress. The one demands an abnormal self-subordination, the other develops a normal self-activity. There can be no compromise between them. The word to greet the new century with is: Render unto Cæsar what is Cæsar's and unto God what is God's.

DENMARK.[1] With Jan. 1, 1901, the new Primary Public School law goes into effect, which, while it does not initiate any startling reforms, elevates the position of the teacher and evidences the determination of the State to bear a larger portion than formerly of the burden of school expenditure. The new law makes education compulsory between the ages of seven and fourteen, forbids the children leaving school before the latter period, and limits the number of pupils per class to 35. The projects for reform in secondary education have been largely due to certain distinguished teachers and scholars, who have demanded that the work of the Realschule should depend more and more upon the nature of the child, and not so much upon examinations, etc.

The movement here is in the direction of reforms already adopted in the "middle-schools" of Norway. Since January,

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[1] *Deutsche Ztschr. f. Ausl. Unterrichtsw.*, Vol. IV, pp. 301-303. See also C. Michelsen: Danemark. *Rev. Pédagogique*, Vol. XXXVI (1900), pp. 382-395.

1899, there has been published "The Danish Realschule," a monthly journal, the organ of the teachers and the advocate of reform. An interesting item is the proposal of Inspector Rönning, that at the final examinations only two foreign languages be required, German and English, — French to be dropped. Perhaps the most noteworthy address of the closing century is the speech delivered at the Reformation celebration of the University of Copenhagen, in the fall of 1899, by M. Cl. Gertz, the Professor of Classical Philology. In this address the position is frankly taken that not merely for the sake of the schools and of the youth of the land, but also in the interests of classical philology itself, the ancient languages must, the one completely, the other partly, give up the position so long maintained in the educational curriculum of the gymnasium. To know the present and how to live in it, must henceforth be the primary subjects; the luxuries, such as Greek and Latin, must disappear altogether or be relegated to a subordinate position. Denmark enters upon the new century with the same democratic tendencies at heart, which the greater Scandinavian people to the north of her have carried to grander and completer success. Her word is: Act, act, in the living present!

NORWAY. The development of educational reforms in Norway during the last quarter of the nineteenth century has been very rapid. As Oskar Kobel[1] points out, so democratic a country could not long be content with a school system that afforded to children of the well-to-do a better education than it vouchsafed to those of the poorer classes. Hence, the efforts at reformation have resulted in the creation of a unitary primary public school, the foundation upon which are built up all the other advanced educational institutions Mittelschule and Gymnasium, leading to the University, the crown of all. The very small proportion of illiterates is evidence of the triumph of the school in a land where so many obstacles (topographical, social, etc.,) to the diffusion of popular education presented themselves. The benefits of this democratic school system are felt everywhere; the Lapps and the Finns camped on the borders are under its benign influence. To escape the school in the Scandinavian Peninsula is no easy task. Nowhere else in the world does the school, marvellously adapted to Scandinavian individualism, wisely decentralized and harmonized with local peculiarities, yet withal national, exercise such a profound social influence over the whole people.[2] Norway begins the twentieth century with the possession of the school as a social institution in a sense broader and deeper than ever before thought of and her word to the other peoples of the world is: Use the school and shape the people, without injury to the individual.

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[1] O. Kobel: Das norwegische Schulwesen in seiner Neubegründung nach den Gesetzen von 1889, 1892, 1894 und 1896. *Deutsche Ztschr. f. Ausl. Unterrichtsw.*, Vol. V, pp. 124-131.

[2] M. Gandolphe: Suède et Nowège. *Revue Pédagogique*, Vol. XXXIV (1899), pp. 561-576.

SWEDEN.[1] By the law which went into effect Jan. 26, 1898, the Swedish Primary Public School System was reorganized. By favoring the institution of "small schools," where local obstacles prevent attendance at the regular public schools, and of temporary schools, etc., the law seeks to spread as far as possible the benefits of popular education. In cases where certain parents wish to educate their children at their own expense the communes are permitted to establish for that purpose certain schools known as *husfäderskolor*. All private schools are subject to State inspection. The new law has taken good care not to interfere too much with Scandinavian individualism. The burning question of the last few years in Sweden is the reform of higher education, in which is involved the future of the classical languages, which have suffered much in popular estimation since 1886, and figure now only partially in the curriculum of the gymnasia. In consequence of the favorable reception by both Houses of the Swedish Parliament of the reforms proposed by Ernst Carlson, of Göteborg, "two more classes, Lower and Upper Tertia, have been freed from the influence of school-tradition, and given over to the formative energy of the modern spirit."[2] Another step has been taken towards relegating the classical languages to the university, which seems their destiny in Scandinavian countries. The weakness of the classicists in the debate in the Reichstag marks the beginning of the end. The words of one of the participants: Let us have our children begin the twentieth century with a more intimate knowledge of the languages of the great peoples who live in it!—will serve as motto for the coming years.

RUSSIA.[3] Russia, at the beginning of the twentieth century, is still a country whose educational system is largely formless and unco-ordinated. The university student and the professor must live under the eye of the authorities, whose hand, particularly in the last two years, has lain heavy upon them. An "inspected university" and a "policed professoriate" belong to the land of the Czar alone, although signs of something similar are perhaps to be discerned in recent German governmental actions. In Russia, too, the public school teacher, in order to eke out his income, has, even now, to be bee-keeper, book-binder, vegetable-gardener, carpenter, and (since the institution of the brandy-monopoly) even bar-tender. At the bottom and at the top of the educational ladder the obstacles which prevent natural and thorough evolution seem, at present, insurmountable. But Russia is already in process of educational evolution on a vast and imposing scale. Within the last ten years both the expenditures for public instruction and the number of pupils have doubled. Siberia has shared largely in this movement.

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[1] O. Kobel: Die Reorganization des schwedischen Volksschulwesens. *Deutsche Ztschr. f. Ausl. Unterrichtsw.*, Vol. V, pp. 39-43.

[2] H. Klinghardt: Der neue Reformvorschlag im schwedischen Reichstage. *Deutsche Ztschr. f. Ausl. Unterrichtsw.*, Vol. V, pp. 132-141. See also: *Ibid.*, Vol. VI, pp. 232-234, and Vol. V, pp. 179-183.

[3] A. Neufeld: Das russische Elementarschulwesen. *Deutsche Ztschr. f. Ausl. Unterrichtsw.*, Vol. VI (1900), pp. 44-55; see also pp. 73-79. See also *Ibid.*, Vol. IV, pp. 315-322, Vol. V, pp. 74-83, and Neufeld, in Vol. IV, pp. 206-210, on "University Extension."

This zeal on behalf of popular education and progress of a remarkable order in the matter of technical instruction are the two great things with which Russia begins the new era. The idea of "University Extension" has the complete sympathy of the most intelligent classes of the empire, and the number of establishments for the spread of education among the people increases every year. Some of the plans already in operation in Moscow provide for lectures in the houses of the people, quite as remarkable an endeavor to reach the masses as is seen in some of the recent developments of popular education in the Scandinavian countries. The most noteworthy results in particular of the stirring of Russian thought at the end of the nineteenth century, are the foundation of the Oriental Institute at Vladivostock, in Siberia, on the Pacific, and the creation of the "Peoples' University," at the other extremity of the Empire in St. Petersburg,—the one a colonial commercial and training school of a very high order, under State auspices, the other, due to private initiative and established by the Pedagogical Society of the capital city as a monument to the memory of Uschinsky, the famous Russian teacher. The success of this, which, considering the circumstances of the country is one of the most original movements of the age, depends upon the events of the opening century. Certainly Russia has ended the nineteenth well.

ROUMANIA.[1] The chief contribution of Roumania to the educational phenomena of the twentieth century is its dual system of rural and urban schools, the development of which deserves the closest study. This diversity of primary public schools is based upon the recognition of the fact that the environment and nature of the country child are so different from those of the city child, that to demand exactly the same knowledge or to force upon both exactly the same curriculum would benefit in the end neither the State nor the individual. To this system there has been wisely added a dual normal school system as well. In these schools the corset is frowned upon, and vertical writing in force. In her dual system of rural and urban schools Roumania may be pointing the way for other countries also, for the movement to secure "regional education" in France may, in the end, develop a somewhat similar state of affairs.

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[1] M. Piat: L'Enseignement Primaire en Moldavie. *Revue Pédagogique*, Vol. XXXVI (1900), pp. 79-92.

BULGARIA.[1] Since about the middle of the nineteenth century, when the first real signs of national awakening took place, the Bulgarian people have busied themselves with the development of education upon a national basis. The "Bulgarian School" had a hard battle to wage against the Greek clergy, with their aim of Hellenizing the country. Since 1880–1 the development of the educational system has been, in many ways, rapid. The schools are at present largely under the statute of 1891. In the matter of the Mittelschule important advances have recently been made, and improvements initiated in the training schools for teachers. How needed all this is may be seen from the fact that in 1893 only 15.63% of the inhabitants could read and write. An interesting feature of recent Bulgarian educational activity is the influence exerted in the neighboring land of Macedonia.

GREECE. In elementary education Greece has prepared for the new century by passing the law promulgated Sept. 27, 1895, an enactment penned by Ch. Papamurku,[2] of Athens, "a law unique in the educational history of civilized countries." The effect of this law was practically to abolish or repeal all other existing statutes relating to the elementary public schools, and under this anomalous condition of affairs, the only good result known is that a valiant and learned school inspector (who is now the chief educational power) may do something to help along a good teacher, if haply he may find him. With respect to higher education the most noteworthy thing is the proposal to restrict still further classical instruction in the gymnasium, further extend the "mixed" system, and give more weight to the practical and social needs of the individual and of the nation. This means also similar reforms sooner or later in the corresponding institutions in the Hellenic districts of Turkey, the necessities of competition with Bulgarian, Servian, Roumanian and Armenian students whose training is now no longer weighted with the classics as of old, making such a step eminently desirable. Greece, like Italy, will enter upon the twentieth century with less of the fetishism of "classical culture," and more desire to follow the general current of reform, more respect for "the educational needs of the present."

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[1] J. Meier: Die Volksbildung in Bulgarien. *Deutsche Ztschr. f. Ausl. Unterrichtsw.*, Vol. IV, pp. 176-188.

[2] Der Elementarunterricht im Königreich Griechenland. *Deutsche Ztschr. f. Ausl. Unterrichtsw.*, Vol. VI (1900), pp. 18-35. See also *Ibid.*, Vol. V, p. 340.

HUNGARY.[1] The land of the Magyars has always been one of the most interesting countries of the world, and this is especially true of its educational history. In Hungary, primary schools have the task of shaping two races into a unity of patriotism and intelligence that will make Slav and Magyar both loyal citizens of one and the same country. In secondary education the trouble has been not so much national and religious differences as curriculums and courses of study, the strife between classic and modern education, etc. Hungary has set the pace for the other countries of Europe in the twentieth century by its treatment of Greek in the high-school courses. Under Count Csaky, as Minister of Education, in 1890, Greek was made elective and now flourishes to any large extent only in private and ecclesiastical institutions, or by reason of the zeal and industry of a few teachers elsewhere. To-day the study of Greek seems likely ere long, to be confined altogether to the university faculties. Latin, of course, historically more important to the country, is deeper rooted, but last year the Latin hour in the high schools has suffered some curtailment to the profit of the Hungarian language. The teaching of French has gained ground also, a fact worth noting, since, although the study of German is important on account of relations with Austria, the German element in Hungary proper is clearly on the wane. An interesting fact, emphasized by Prof. Kont, is that, by a recent reform in the curricula of the gymnasia, a relatively important place has been given to the study of the history of art, *i. e.*, what M. Perrot has pleaded for in the *Revue des deux Mondes* for France, is already realized in Hungary! The autonomy enjoyed by the higher educational institutions of Hungary has long been very great. The advantages and abuses of this freedom and self-government are illustrated in the recent history of the University of Budapest. Hungary begins the new century with the possession of the "Joseph Eötvös College" (founded in 1895, upon the model of the École normale supérieure of Paris, and named after the famous Magyar statesman), at Budapest, an institution from which the very best results are confidently expected in the production of teachers for the future. Perhaps the best word from Hungary for the twentieth century is contained in the letter (July 6, 1899) addressed by Minister of Education Wlassics to Baron

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[1] J. Kont: Notes sur le mouvement pédagogique en Hongrie. *Revue Internat. de l'Enseignement*, Vol. XXXIX (1900), pp. 77-81.

Eötvös, son of Joseph Eötvös, and Professor in the University of Budapest, in which he sets forth his high ideals of the future teachers of the land.

AUSTRIA. The University of Prague, founded in 1347, is the oldest German University, dating its origin years before the establishment of any such institution of learning in what we know now as Germany. The inaugural address of the Rector, Dr. Carl Ritter von Holzinger,[1] delivered in the fall of 1899, was devoted to the consideration of "The Relation of the German Universities to the Educational Movements of the Present." As a representative of classical philology, Dr. von Holzinger takes heart of grace in reviewing the history of his science during the past century, claiming that, far from being in a moribund condition, it is both generally and in particular, lusty and full of life. Indeed, a new daughter science, Papyrology has come into the world, whose systematic development is one of the outlooks of the future. Nor is even book-philology to be despised for her century's achievements. The bulk of the address is an argument for "keeping the German Universities as they are." Dr. von Holzinger, a partisan of the "historical continuity of culture" school, holds that the duty of the gymnasium is to prepare for the university, and thinks that the university must educate the people by the clergymen, legal minds, statesmen, physicians and pedagogues whom it produces, and not, by lowering its ideals, cater to the masses and covet the loud applauses of the present age,—it ought not, and cannot be a *Volkschule* in every sense of the word. As a true classicist, he tells us that, since the culture and science of the German people, came out of the Latin-writing Middle Ages, leading back to the Roman world-power, whose culture in literature and art, and largely also in science, are ultimately of Hellenic origin, the culture-heads of the nation should, in their years of youth, pass over the same route, which was traversed by the race in its young centuries. At present there are four questions, which, more than any others, demand attention, as possible disturbers of, or obstacles to, the ideal development of the university. These are the *Seminar*, the Technical Institutions, Women at the Universities, and University Extension.

The relation between lectures and seminary work is one of the important questions with which the internal economy of the university has to deal. Moreover, if classical studies are ultimately to be banished from the gymnasium, and the barriers between the polytechnic schools and the universities are to be thrown down, the seminaries, some think, would be flooded by the eager crowd thronging into the universities. But the crowd, if past experience counts for anything, would very soon stream out again. The lack of necessary preparation would soon weed out the unworthy. The *rôle* of the seminary is not to be a place for going over again the matter dealt with in the "college" (whose place it is to lead up to entrance upon those fields where assured knowledge is no longer the all, but, where doubt and free investigation are the chief things that engage the mind), but to lay before the students as *participants* (Mitarbeiter) difficult and complicated questions, the full treatment of which in the lecture room is impossible. The good lecturer, in his way, is unexcelled, as is the good book, in its way, but the day of autodidactics by private study of a text book is over, and the heterodidactics of the lecture room, must be supplemented by the syndidactics of the seminary. To preserve the seminary in its proper *rôle* is absolutely necessary for the future weal of higher education. To benefit, by the seminary method as many as 20 students, is to task to the utmost the powers of the best instructor, while to exceed the proportion of five hours of lectures to two hours of seminary work, means to render necessary radical changes in the curriculum of the university, the extension of seminary work at the expense of the "college." With regard to the second question, Dr. von Holzinger takes the ground that the polytechnic students "are not, and do not need to be, the bearers of a historic culture." Their practical goal is not the guidance of men's minds by word and pen, as is the case with the clergy, the lawyers, political officials, teachers, and, in an eminent fashion, the masters of the healing art. The Realschule without Latin is, therefore, as it exists in Austria, the proper foundation for the "Technical High School," and such things, *e. g.*, as the introduction into these schools of philological methods (in imitation of the gymnasium) of teaching French and English are to be deprecated, as well as certain other reforms. To preserve these schools as they are, is, again, in the best interests of the university. To unite externally the technical schools with the university, without the presence of a real unity of spirit, would be to create "a fantastic and hybrid colossus." Neither would really gain by such a process, and the loss in quality would be marked. The development of the technical schools, some of which have already lived their first century, in accordance with their own nature and ideals, and the recognition of their honorable and well-acquired right to a diploma equal in law to that of the Doctorate conferred by the universities, are things devoutly to be wished. But "Doctor-Engineer" is hardly the best way of phrasing it. Viewed from the standpoint of the ideals of the German University, the admission of women, is not, Dr. von Holzinger thinks, at all desirable. For him woman is receptive by nature and her entrance "into the old walls of the university" will certainly result in an undesirable reduction in the proportions of the productive element among the students,—in other words the level of the product of the union of instruction and research, for which the university stands, will sink. Another argument advanced against the admission of women is the injury it will bring to the *Lehrfreiheit*. There is a danger to the foundations of the university,—the gymnasium. If women frequent the universities, they will naturally enough desire to graduate from the gymnasium, and a new weapon for the anti-classicists will be found, for the ancient authors did not write for young women, and *nil decet invita Minerva*. Dr. von Holzinger expresses the fervent wish that this "woman question" were only a temporary one and that ere long the universities would be the men's own once more. He seems to glimpse an ideal solution of the question in the development (" short is life and science long") of institutions for women, conducted by women, whose goal shall at last be attained in an equality of scientific standing about which there will be little dispute. To train women at the highest stage of education by men alone, is to refuse them real equality while seeming to confer it upon them. In the so-called "University Extension" (with its *Hochschulkurse*) Dr. von Holzinger sees another danger that threatens "the strictly scientific work of the university." Popular lectures now and then by professors are all right in their way, but to create out of them an institution and affiliate it with the university, is to change the character of the latter. Here, again, the level of the university sinks, and *Lehrfreiheit* is limited, for the bond between the lecturer and his hearers is no longer that which the freedom of the university cherishes. Too often, too, "University Extension" tempts young lecturers to covet cheap effect and dispose of their wares with the market cries known elsewhere. The years that ought to be devoted to the quiet study of the deep problems of science are apt to be misused for the loud promulgation of half-understood truths. The ideal here is perhaps some further development of the *Volksschule*, which shall provide for its pupils, who do not enter the technical schools, become teachers, or follow courses leading the university, an educationally advanced status *sui generis*, as have all the rest. Not by lowering the university, but by bringing up the people, will the good work be best accomplished. This, although cast in too conservative a mould by Prof. von Holzinger, is the best word from Austria on the eve of the new era.

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[1] Das Verhältnis der deutschen Universitäten zu den Bildungsbestrebungen der Gegenwart. *Das humanistische Gymnasium*, 1900, pp. 49-57. Also in *Bohemia* (Prague), 15 Nov., 1899, and as pamphlet (Prague, 1900).

ITALY. Italy has made many advances in education during the last hundred years, but the brief address delivered by Minister of Public Instruction, Bacelli,[1] at the opening of the Exposition of Hygiene at Naples, May 9, 1900, is characteristic, and may well serve to strike the note for the twentieth century. Understood, in the double sense, morally as well as physically, *Salus populi suprema lex*, the word of the fathers is that of their descendants of to-day. Rome of old was great not alone in arms and laws, but in social medicine besides. This legacy of public and private hygiene, this reverence for the professors of the healing art, so well summed up in the saying of Cicero: "In nothing do men resemble the gods more than in giving health to men," belong to the most precious patrimony of the Italian people. To-day, when Italy is seeking to unite her new to her ancient greatness, it is well to see arising again, refined and improved by modern science, the old cult of public hygiene. Hygiene is civilization; hygiene is wealth. It diminishes the contingent of the weak and feeble, the social dangers of disease, the miseries of the frail who ought to survive. Hygiene strengthens the fiber of the child and increases the power of resistance of the aged. The healthy old man is "the past living in the present, the experience teacher of life, the counsel of most value in trying moments." The child is "like a flower that has not yet disclosed the perfume of its calyx to the breezes, but by education, which surrounds it with hygiene, every one can have a presentiment of the fragrance. Its life is futurified between joy and hope. Father, mother, country, renew in it the law of human perfectibility, rightly hoping that its person will be fairer, its arm stronger, its mind more fleet, its will more virile, its life more radiant." The greeting of Italy to its new century is: Health, more health, of body and of mind.

SWITZERLAND.[2] Many of the cantons of the confederation have during the past few years made noteworthy changes in their school laws, and the Bundesrat on March 21, 1899, passed a measure for the Federal subvention of the public primary schools. The cantons of Lucerne and Zug, by reason of the joint action of both political parties, have been able to bring their new laws in force with the beginning of 1899. In Zürich the law for the reform of the public schools has at last received the approval of the people in the referendum of June 11, 1899, and changes delayed for fifty years have gone into force. All these cantons have taken measures towards a longer school year and towards higher salaries for teachers. Throughout Switzerland the efforts for the education of feeble-minded and other abnormal children have been rewarded with increased success. Trade and technical schools have also gained in popular interest and esteem. The canton of Solothurn begins the new century by admitting girls to its trade-schools, and Schaffhausen by throwing open its gymnasia to women. The canton of St. Gall has marked the advent of the new era by determining upon the foundation of a commercial and trade high school. In the matter of secondary education, even the most conservative supporters of the classical gymnasium are casting about them for means to stem the tide of social and other influences which continues to rise higher every year. Concerning university education, the discussion at the Conference of Zürich teachers at Pfäffikon, in September, 1898, may be taken to voice the best thought of Switzerland. The address of Dr. Lang, Rector of the University of Zürich "On the Place and Function of the University in our Democracy," emphasized the sacred duty of popular education from the primary public school up to and including the university, which ought to be well supported by the Federation as representing the sovereign people. The next speaker, Pro-Rector Schurter, emphasized the words of Dr. Lang, and added his opinion that the whole university instruction should be absolutely free, which would more and more tend to make of the teacher not merely an educator of children, but also an educator of the people. Looking towards an absolutely free university, then, Switzerland faces the new century.

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[1] Bullett: Uffic., 17 maggio, 1900, pp. 935-936.

[2] See *Deutsche Ztschr. f. Ausl. Unterrichtsw.*, Vol. V, pp. 83-85; Vol. IV, pp. 64-66, 143-146, 236-238, 322-325.

LUXEMBOURG.[1] The recent attempts to seriously modify the liberal public school law of 1881, in the interest of the church, have resulted in a compromise by which the reactionists do not gain nearly so much as they expected.

HOLLAND.[2] The most noteworthy event of the closing year of the nineteenth century in the Low Countries is the passage of the compulsory education law, the enforcement of which will go far towards eliminating the 60,000 children of school age who, in 1897, were reported as not having had any education. The practical mind of the Dutch is revealed in the school at Enschede, with its motto of "education through and to work." The extension of popular education is represented in the last few years by the considerable development of the "repetition schools," and the schools for adolescents and adults. Other events worth recording are the gains of the sectarian adversaries of the public schools (especially the agitation of the *Eene school met den Bibjbel* Society) and the increased substitution of German for French in the curriculums of the higher schools. For Holland the new century opens less auspiciously than might have been hoped, with the movement in favor of more or less completely sectarianizing the public schools in full vigor and more aggressive than ever before.

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[1] A. Grosskopf: Ueber das Volksschulwesen im Grossherzogtum Luxembourg. *Deutsche Ztschr. f. Ausl. Unnterrichtsw.*, Vol. IV, pp. 285-291. See also *Ibid.*, p. 58.

[2] G. Lefèvre: Pays-Bas. *Revue Pédagogique*, Vol. XXXVI (1900), pp. 662-678. See also *Ibid.*, Vol. XXXV (1899), pp. 75-96, and Vol. XXXVI, pp. 508-512.

BELGIUM.[1] As the new century dawns, the hand of the clericals still lies heavy upon the Belgian school system, and even more than in Holland they seem to have gained in the last few years, till it can almost be said that the State serves the church instead of the church serving the State. In Belgium, too, the French language has lost, for Flemish is becoming more popular than ever as a State language beside the former. Against the "pernicious activity" of the clericals may be set off the remarkable zeal of the liberals in "University Extension"[2] and broad scientific teaching, the latter incarnating itself in the "Free University of Brussels," whose influence has been longer-lived than the institution itself.

FRANCE. As containing some of the best end-of-the-century thoughts about higher education in the French Republic, the address of M. Lévy-Bruhl,[3] at the opening of the courses in the Faculty of Letters at the University, of Paris, is worthy of more than passing notice. The name *University*, says M. Lévy-Bruhl, given to the vast school where all the sciences are studied separately and together, is justified by the solidarity existing among them, which unites them without any loss in independence or in self-diversity of method. And the true scholar and scientist should be cast in its image, not devoted to one specialty to the utter exclusion of all other knowledge, and not so shallow as to be deep in nothing. The university does not ask for that docility which degenerates into passivity; it asks the disciples of science to be bold, but not too bold. There is a *camaraderie* as well as an *élite* of science and the influence of men working together, the *Mitarbeit* of the Germans, is sometimes as stimulating and productive as the word or the example of the teacher. The students who are alive to their opportunities and in love with their subjects cannot remain mere university atoms, but must advance by working together. The university is truly an institution of learning, but it is just as certainly an institution of unlearning, for there the student must abandon many absurd opinions and beliefs, the result of his previous education in an environment more or less unscientific in its thoughts and actions. When he passes out he ought to have freed himself from this accumulated dross and taken on the ways of science which are the ways of truth. Henceforth it ought to be more difficult for him to be seduced by illusions, to be misled by error or to compromise with it, to shut his eyes to the light. In other words, his character ought to be established beyond all possibility of successful assault. To use a university for purely selfish utilitarian ends is to mistake its *rôle* altogether. The university is not an "examination 'oven,'" a preparatory institution for men who want degrees or who need them. The diploma is the least thing the real graduate takes with him when he leaves the university. His success is greatest who has entered into the spirit of science and acquired that open mind and unbiased soul that constitute the true man of science. Unto him all else is added glory beneath which shines and sparkles the unadulterate gold. If we read aright the developments of higher education (and, indeed, of all education) in recent years in France, the sum and substance of its message to the new era upon which we are now entering is: Let each man be, as he ought to be, a *university* in himself, the human incarnation of the institution, deep where it is deep, broad where it is broad, and true and beautiful with its truth and beauty.

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[1] G. Lefèvre: Belgique. *Revue Pédagogique*, Vol. XXXV (1899), 258-258. See also *Ibid.*, Vol. XXXVI (1900), pp. 501-507, and *Deutsche Ztschr. f. Ausl. Unterrichtsw.*, Vol. IV, pp. 119-120, 217-218; Vol. V, pp. 44-48.

[2] L. Leclère: L'extension Universitaire en Belgique. *Revue Internat. de l'Enseignement*, Vol. XL (1900), pp. 97-103.

[3] Ouverture des Conférences à la Faculté des lettres de l'Université de Paris. *Rev. Internat. de l'Enseignement*, Vol. XL (1900), pp. 385-395.

SPAIN.[1] The colonial *débâcle* resulting from the Spanish-American war of 1898 has led many serious and patriotic men to believe in the necessity of a radical reform in politics and society, if their country is to live worthily in the centuries to come. The logical consequence of these events they believe to be a campaign in the Iberian peninsula similar to that inaugurated by Fichte in 1808 for Prussia, and to that begun for France by her patriotic educators in 1871. The real intellectual and educational condition of Spain at the present time is indicated in the brief article of Rafael Altamira, Professor of Law in the University of Oviedo. The politicians and the manufacturing, commercial and industrial combinations and associations do not look with much favor on this project of an educational campaign, preferring to agitate for and achieve reforms of an economic nature, reduction of taxes, decrease in the budget of expenditures, etc. It is unfortunate that this zeal for reduction of expenses has led the authorities to threaten to cut down the revenues of the department of Public Instruction, at least this seemed to be the intention of the Silvela ministry, but the action of the Cortes in rejecting almost all the proposed retrenchments gives hope that the crisis is passed. During this agitation for economy the Chambers of Commerce and the Producers' League actually demanded the suppression of universities, when the crying need was for the augmentation of primary schools.

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[1] L'Enseignement en Espagne. *Revue Internat. de l'Enseignement*, Vol. XXXIX (1900), pp. 24-27. See also: Questions présentes d'Enseignement en Espagne. *Ibid.*, Vol. XL (1900), pp. 396-401.

In intellectual circles the real reform necessary was better understood. The result of a meeting at the Athenæum of Valencia was the demand that there be established by the government a department of Public Instruction on an equal footing with other branches of the Public Service, and that primary education be made obligatory. It is to be feared, however, that for years all grades of education must remain much as they are, unless the desired reforms are brought about by private efforts. In the matter of educational legislation one great difficulty consists in the arbitrary way in which changes are continually made by the powers that be. One project of reform is buried as soon as the author leaves office, and the idea of his successor is soon tampered with or abandoned by the next to follow. Just now it is proposed by the government to lay before the Cortes a plan for strengthening the universities both in personnel and in resources. It is also intended to enable certain university foundations to issue certificates of study which will be recognized by the State. This is little enough and may amount to nothing. One noteworthy feature of education in Spain during the last few years is the interest taken in popular education by the universities of the land. Public lectures or open courses have long been known in Spain, and the Universities of Saragossa and Barcelona have recently resumed this practice with great success. But the University of Oviedo has entered upon the subject in the sense of the English and American "University Extension," largely as a result of the labors in behalf of this reform of Professor Altamira himself. Outside of the University of Oviedo, the professor gives popular courses before the 'Workingmen's Associations' in such centers of industry as Avilés, La Felguera, etc. The university extension movement at Oviedo, in spite of the opposition met with in certain quarters, has been remarkably successful. One noticeable feature of the work is the good attendance on the part of the women of the classes it is desired to reach. The attendance of workingmen at the Art School has also been very satisfactory. To save the young generation of Spaniards from falling a prey to the vices and corruptions of their fathers is the task of the times. There can be no lasting reform without the education of youth uncontaminated by the evils of the past. Regeneration of the people by the preservation of the young and the development of the virtues, not the vices, of those who have gone before, is the watchword for Spanish Education in the twentieth century. The next hundred years must be starred with Cajals, not blurred with Blancos and Weylers. And the government has done well to begin the new era by conferring a pension upon the greatest Spaniard of the times, the Professor of Histology in the University of Madrid.

PORTUGAL. The little land of Portugal, whose kings were once the scholars of their time, is kept in touch with the academic world of letters and of science by the University of Coimbra. Early in 1900 there was established at this university a "free course" in pedagogy, the opening lecture of which was well attended by students, teachers of all grades of both sexes, etc. The course is given by Dr. Bernardino Machado,[1] ex-Minister of Public Works, and author of several essays upon industrial and pedagogical subjects, the last being a volume on professional education (*O ensino profissional*, Coimbra, 1900). He is also Professor of Anthropology in the university. In Portugal pedagogy has scarcely begun to be taught in the primary normal schools, and, while pedagogical examinations are prescribed for secondary teachers, there is no training-school where they can acquire the requisite knowledge. In a word, there is a deficiency of professional training everywhere among teachers. The need of the times is to supply this lack. For Dr. Machado, the present century is one of socialization and of instruction. Instruction is a social function, a work of dedication, of sacrifice. It differs from the self-education seen in the development to the full of one's own talents in art, industry or science. Instruction or teaching proper, exists, when we sacrifice ourselves and all we are for the sake of developing in others to the full, their faculties, so that they may be educated in the best sense of the term. The school is not only a laboratory, but a sanctuary of virtue as well. By instruction is transmitted the legacy of civilization which goes on increasing always through the personal labors of every individual. And if the school is a temple, the teacher is a priest. The years to come will demand that the teacher be more than a mere physicist, geologist, linguist, etc.,—he must be, before all things else, a man. For the teacher to be at the same time a good teacher and a bad citizen is to desecrate the sanctuary over which he presides. He must have no hidden iniquities before which the altar-lights are abashed. His virtues must not be improvised, his zeal a mask, his service mercenary at bottom. He must live the life of a teacher not merely act it. Education and instruction are parts of the great artistic, industrial, and scientific co-ordination of the facts of human evolution, which must create the morality of civilization, the secular progress of which makes the world better with the passing centuries. This progress of civilization, in its material aspects especially, is proportionally much greater than the increase in the duration of human life, and each new century bids us present to the flying years of youth the best men the race possesses as their initiators into the wisdom of the ages past, and sponsors for the legacies their pupils will leave to the generations yet to be born. From Portugal there comes the wise counsel: Let the teachers of the youth be the best man or woman the nation can contrive to obtain,—*maxima debetur puero reverentia.*

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[1] The Portuguese text of Dr. Machado's Inaugural Address, from which this account is taken, is given in the "Boletin de la Institución libre de Enseñanza," Vol. XXIV (1900), pp. 65-70.

In Germany, notwithstanding the ever-present struggle of the classics against the advances of modern culture, and the ever-increasing participation of women in the higher institutions of learning, the century opens with the question of militarism in all its aspects, as the one most likely to demand the profound consideration of the educated world. The Scandinavian countries, generally and particularly, emphasize the need of popular education that does not interfere too much with the individual. Norway sets the pace for the world, in this respect, with her school as a social institution. The Scandinavian countries also foreshadow the ultimate relegation of the classics as a serious study to the university. For all of them the word is: the school was made for man, and not man for the school. Russia begins the new century by an amazing zeal for popular education and technical instruction, involving all parts of the empire and all races within it. Roumania offers to the world, with more or less perfection, the dual system of rural and urban schools, based upon the needs of the child and the possibilities of his station in life, marking a direction which France and perhaps some other countries show signs of following, to some extent at least. Bulgaria is just shaping her national educational system in accord with racial instincts and ideals, after more or less successfully combating the Hellenizing efforts of the Greek clergy. Greece is struggling with a very anomalous state of affairs in so far as primary education is concerned, but seems to have about made up her mind to yield to the general tendency of the age and restrict the classics in favor of modern and necessary subjects of instruction. Hungary enters upon the new century with new ideas and new institutions. She has cut away the bonds of classicism, is advancing in every direction. Her new efforts to improve the training of teachers well deserve the attention of all other lands. As representing Austria, Dr. von Holzinger's address is probably (in relation to several matters) more conservative than the policy of the government, but the preservation of the university is an ideal shared by all. Italy, in all branches of education, from the lowest to the highest, has made immense strides during the past century, but the note of hygiene struck by Minister Bacelli is peculiarly Italian, as it was before, Roman. Switzerland has distinguished herself by numerous social and economic reforms, the reflex of which is to be seen in her educational institutions and ideas. Amid all other projects the proposal for a national, free university, may well be taken as her best message to the new era. Luxembourg, Holland and Belgium have been assailed by the clericals and sectarians in educational matters, and generally the victory seems to lie with the opponents of free, unsectarian schools, although, up to the present, the latter have not been able to achieve as much, in the way of legislation, as they are intent upon doing. Belgium, particularly, has distinguished herself, so far as the liberals are concerned, by wonderful activity in popular education and university teaching upon a free and untrammelled basis. France, besides the reorganization of the University of Paris, has achieved many other reforms, but no better advice comes from her to the opening era, than that of M. Lévy-Bruhl, let the man be a university as well as his *Alma Mater*. Spain gives forth signs of an educational regeneration, like that activated by Fichte in Germany, and the watchword of the scholars of the land is the creation of a new people by the preservation of the youth from the vices of the old. Portugal, with her single, ancient university, gives forth no uncertain sound, greeting the twentieth century with the demand that the teacher be worthy of the child.

Taken altogether, the trend of current European thought is such that America must beware of resting upon laurels already won, lest some of the other competitors in the race after knowledge and its availment for the needs and ideals of mankind distance her ere she perceives it.

LITERATURE.

Memory. An inductive Study, by W. F. COLEGROVE, PH. D. Henry Holt and Company, New York, 1900. pp. 369.

In many respects this is a book that deserves the careful attention and study of teachers, and one in which they are sure to be interested. The abandonment of the old time "word jugglery" is one of its highest commendations; yet when the author comes to "soul" and "free-will" he shows that he is not completely "free." Teachers are tired of wrangling over psychological definitions. After a careful study of the widened view of memory which this work presents, the average teacher will be much less able to define memory than when he began, but he will find his mental horizon enlarged. A book bringing together the most important historical data, stating concisely the problems involved, the conflicting views, and the work accomplished, in a single branch of science, cannot help but be serviceable to the public. Every day we are in search of such books.

The work is enriched by many things not usually found in a treatise on memory. It covers the historical and biological aspects, diseases of memory, brain and mind, memories, individual memories, apperception, association, and the pedagogical application. Many things that ordinarily seem foreign to the subject are shown to have a vital connection. But despite all this one cannot help but feel that under such topics as brain and mind, attention and association, the writer leads us too far from the main theme. The chapter on Biological Memory contains many striking examples and analogies after James's style of psychologizing, all of which makes it interesting. A few of the examples are of such a nature as to weaken, and some that are cited as evidence of conscious memory in animals may readily fall under pure reflex action. The writer realizes this, and on page 58 admits it. If conscious memory can be carried thus far, why not ascribe it to all substance? The chapter closes by a tacit acceptance of Hering's theory of organic memory. The definition of organic memory and that of conscious memory (p. 90) are supposed to include the whole of memory phenomena. But this is doubtful. To instance only one of many cases that might be mentioned, the post-hypnotic activity cannot come under organic memory, for it is not a "racial experience," and the phrase, "with the consciousness that they (impressions) previously have been experienced," excludes at least most of such activity from conscious memory. Where will the writer classify the activity of No. III, mentioned on page 117, who handles drugs with accuracy but has no knowledge of his previous life? Besides presenting aphasia, the writer brings forth several recent and interesting cases of diseases of memory, of which that of Mr. Hanna and the unknown identity are the most important.

The chapter on Individual Memories is essentially new and suggestive. The chapter on the Pedagogical Application contains valuable hints and suggestions, but the thoughtful reader will discover these all through the work. Although the writer claims to use memory as synonymous with habit (p. 339), it is to be regretted that habit does not receive a definite treatment in its relation to apperception, interest, attention, etc. At every point of the entire work the student will see psychology to be a vital, personal thing, and will not think of psychic phenomena as belonging to a few extraordinary individuals who possess the power of making things difficult to understand.

The above is the pedagogical criticism. The philosophical would doubtless read quite different, but as the philosophy is a secondary matter in the work it has been left so in the criticism. In his chapter on Brain and Mind the author throws out some questionable metaphysical hints. He adopts what he calls genetic parallelism and functional interaction (p. 169). He manifests his fear that modern psychology appears inclined to give up "soul" and "free-will." This war has undoubtedly been vigorously waged, but the process has been largely one of changing old wine into new bottles.

D. E. PHILLIPS.

College Administration. By CHARLES F. THWING. New York, 1900 (The Century Co.).

President Thwing divides this book of 317 pages into seven chapters, viz. (1) The organization of American education, (2) the constitution of the American college, (3) the college president, (4) special methods and conditions of administration, (5) the government of students, (6) financial relations and (7) administrative and scholastic problems of the twentieth century.

The work represents the careful observation of years in addition to the information which President Thwing has been careful to collect by more direct methods, such as circular letters. On many disputed points in administration we have the testimony of many leading colleges given in the words of their presidents. The note of the book is balance. Whatever the question for discussion may be, whether the workings of the elective system, the scope of academic freedom or the value of fraternities, the reader always finds a careful presentation of both sides of the controverted issue. President Thwing also gives evidence of unusual insight into the general educational problems of the country.

H. D. SHELDON.

Comenius and the Beginnings of Educational Reform. By W. S. MONROE. Great Educator Series. New York, 1900.

Since the scholarly work of Mr. Keatinge, there has remained little new to be said concerning Comenius which could be put into a small volume. Prof. Monroe, however, has performed a valuable service in giving a clear readable account of the great Moravian suitable for general readers and college classes in the history of education. The introductory chapters on the forerunners of Comenius and the closing sections on the influence of Comenius give an excellent setting to the main theme. Like many biographers, Prof. Monroe somewhat exaggerates the influence of his hero. The volume fully reaches the high standard maintained by the editor of this series.

H. D. SHELDON.

Aspects of Mental Economy. By M. V. O'SHEA. An essay in some phases of the dynamics of the mind, with particular observations on student life in the University of Wisconsin. Bulletin of the University of Wisconsin, No. 36. Science Series, Vol. II, No. 2. Madison, 1900.

This monograph presents the results of a questionnaire issued to the students of the University of Wisconsin. It aims to show how a student may make the most of himself from the standpoint of energy. The title is somewhat misleading, as the monograph deals with such problems of student hygiene as condiments as force producers, the influence of tea, coffee, tobacco, alcohol upon the production and expenditure of force in the organism, modes of cooking, hours for meals, taste vrs. expense in the cost of food, exercise and sleep. The work is carefully prepared, abounds in charts and tables, and epitomizes recent investigations on the subject of food. To lecturers on hygiene, advisers and professors of physical training in colleges, Prof. O'Shea's contribution will be of value. H. D. SHELDON.

Tuskegee, its Story and its Work. By MAX THRASHER BENNETT. With an introduction to Booker T. Washington. Boston, 1900 (Small, Maynard & Co.).

The opening chapters of the book present in brief and simple outline the story of Mr. Washington's life and of the rise of Tuskegee. Then, one by one, the different departments of the school are described. The household training for women, the agricultural and dairying department, the machine shop and building trades, the educational and theological establishments, all are presented in clear forceful style. In the closing chapters we find accounts of the "workers' conferences" and a record of opinions expressed in regard to the work of the school by many celebrities, including presidents Cleveland and McKinley.

Mr. Thrasher writes as a devoted admirer of Tuskegee and its methods. A critical inquiry into the different aspects of the educational problem in the south cannot be obtained from Mr. Thrasher's book, although it contains many effective pictures of the conditions of life among the negroes. The form of the book is irreproachable, and it is embellished with many excellent illustrations. While pre-eminently readable and interesting, it is of much less value than Mr. Washington's own articles in gaining an insight into the conditions of the educational South. H. D. SHELDON.

PROFESSOR RAMÓN Y CAJAL.

The *Heraldo de Madrid*, in one of its recent issues, devotes a two-page supplement (illustrated with portrait, views of laboratory, etc.) to an appreciation of Professor Santiago Ramón y Cajal, to whom the Spanish government has granted a pension in consideration of his distinguished scientific labors and discoveries in histology. The tribute consists of a sympathetic sketch of Cajal, the man and his work, by Dr. Amalio Gimeno, of the medical faculty of the university, a brief account of Cajal as artist, by Saint-Aubin, and a bibliography of his published works (107 books and articles, of which 5 are in German, 18 in French, and one in English, are titled). Dr. Gimeno pays an eloquent tribute to the hospitality of the Hon. Stephen Salisbury, who entertained Prof. Cajal during the Decennial Celebration of Clark University in June, 1899. He also records with gratitude the impression made upon Cajal and upon Spain by the presence in the decorations of the university building of the Spanish flag, convincing evidence that the jealousies of nations and the temporary paroxysms of war have no place in the awarding of the laurels of science. It is only by reading an article like that of Dr. Gimeno that one gets an idea of how much the justly deserved honors paid to Cajal meant to Spain in the hour of her material defeat and political disruption. It was, indeed, something unique in history. No wonder Cajal speaks of this experience as "the pleasantest page of my life," and that his eminent countryman adds—"and for Spain, pleasanter still and full of honor." A. F. C.

Dickens as an Educator, by JAMES L. HUGHES. (International Education Series.) D. Appleton and Co., New York, 1901. pp. 319.

"Dickens was the most profound exponent of the kindergarten and the most comprehensive student of childhood that England has yet produced." He was the great apostle of the new education to the English speaking world." "No writer has attacked so many phases of wrong training as in the twenty-eight schools he has described." This book will be a revelation to those who are not familiar with Dickens, and a very convenient work of reference for those who are. Dickens is wisely allowed himself to talk through two-thirds or more of the book. Mr. Hughes has done a real and great service to education by this labor of love. Few will begin it without desiring to read it through to the end. Two criticisms, however, will, we opine, be made by most who do so. First, that his chapters, the overthrow of coercion, child depravity, cramming, free childhood, individuality, imagination, sympathy, bad training, good training, community, minor schools, are artificial divisions of his matter which overlap each other and greatly interfere with the unity of many of Dickens's stories. Oliver Twist, *e.g.*, is presented under several, and just at the interesting stage we are often compelled to continue in a later chapter. Secondly, many though not all of the editor's comments are mere paraphrases in large type of what Dickens has said better and more clearly just before or after in small type. The editor thus gives himself unwittingly a somewhat undignified position.

Der Töchterschule entwachsen, von ELISE ROTH. Schwabacher, Stuttgart. pp. 266.

This very tasteful volume treats of the culture of the soul and the importance of domestic occupation; on darning and patching and the repair of old clothes; on the making of under garments and bed clothes. Another section is devoted to general rules for housekeepers; another to cleanliness in dwelling rooms, rinsing in the kitchen, on washing and ironing, on cleaning and preservation of clothes, modes of keeping beds fresh; another on amusement and movement plays for children during the first year of life, on occupations suitable for children from the second to the sixth year, and another group for those older; with a section on proverbs, prayers, and songs for small children. The final chapter is devoted to plays for the young in the open air, especially croquet and lawn tennis. The work is illustrated by music and song.

Die Grundzüge der pädagogischen Pathologie, von W. SCHUMANN. R. Wagner Sohn, Weimar, 1900. pp. 108.

The history of this new and interesting topic—pedagogical pathology—is first briefly sketched, which the author traces well back into the last century, although it has been supposed that it was founded by Strümpell. Hegel, Pestalozzi, Francke, Schelling, and Schleiermacher are all thought to have contributed somewhat to it. A Herbartian chapter follows on æsthetic feeling, interest, etc., and the characterization of a healthful child. While the chapter on the unhealthful one attempts to designate and group faults, signs of degeneration—moral, mental and physical, the effects of psychogenic and inherited disturbances, faults of speech, of concepts, disposition, character, etc.

Esquisse d'un Enseignement basé sur la Psychologie de l'enfant, par PAUL LACOMBE. Armand Colin et Cie, Paris, 1899. pp. 212.

This trim, smug booklet has a preface which intimates that education should be based upon infant psychology, but immediately proceeds to discuss problems of general or special education, physical and moral science, vernacular *vs.* modern languages, the Latin question, and its claims to modern views are based largely upon recognizing the "mobiles" as a class by themselves. There must be play; education must be real; there must be manual training; the child must be watched although it is free and voluntary, and should be left much to its own disposition. Certain hours (and this is the best thing in the book) should be set apart for this purpose in which the child should be encouraged to do what it will.

The Boys' Club in Theory and Practice. A Manual of Suggestions for Workers, by B. PAUL NEUMAN. With supplementary chapters by A. F. Jenkin, E. M. S. Pilkington, and T. E. Gray. David Nutt, London, 1900. pp. 184.

The true politician is he who sets to work at the right point and whose first care is to make youth as perfect as possible. This book is a plea for the establishment of one particular kind of boys' club that has proved successful in London, and which the author wishes to see revolutionized "post school education." After discussing existing organizations, the theory of boys' clubs is considered under membership, government, education, gymnastics, finance, health, penalties, and prizes. Clubs are essentially run on the principle that they must be large; must have amusement that can yield a revenue; must drop everything unpopular, especially head work; and the boys must have a substantial share in its government. The reverse of all this is more nearly the best ideal in organization.

Education and Life, by JAMES H. BAKER. Longmans, Green, and Co., London, 1900. pp. 254.

President Baker, following the distinguished examples of Presidents Eliot, Gilman, Thwing, and Bradley, here publishes his various papers and addresses during a number of recent years. Those he calls educational are—the heritage of the scholar, Plato's philosophy of education and life, secondary education, educational values, power as related to knowledge, moral training, can virtue be taught? college and university, university ideals, general education practical. The second part of the book, entitled "elements of an ideal life," contains the modern gospel of work, the psychology of faith, education as a personal ideal, Greek virtue in modern applications, student as citizen, optimism and interest, ethical and æsthetic elements in education, and progress as realization.

The Childhood of Ji-shib, the Ojibwa and Sixty-four Pen Sketches, by ALBERT ERNEST JENKS. The American Thresherman, Madison, 1900. pp. 130.

This is a true story to the Ojibwa child to whom the world is a very different thing than to us. Before the white man came there were a thousand tribes of red men in America speaking a hundred languages, each more unlike the others than the English is unlike the Russian. They all believed in animal gods, and that the ancient animals were far larger and stronger than those now living. Some thought the great old muskrat made the world, and even the little one to-day adds something to it by building its house of mud and grass, so each tribe held some animal sacred. It was taboo to kill or eat them, and to even those they killed they made sacrifice and imputed to all animals and to all things resembling animals some mysterious power. Often each warrior had his own guardian animal or totem, whose symbol he wears for protection and whose name he may bear. All this attuned their souls closely to the living forms of woodland and prairie. This work of Dr. Jenks, Professor McGee compares favorably with Hiawatha and with Cooper's Deer Slayer in its insight into Indian character. Here the white child can learn something of the passing Indian.

Kinderleben in der deutschen Vergangenheit, von HANS BOESCH. Eugen Diederichs, Leipzig, 1900. pp. 131.

This is an elegant history of literature illustrating child life, every page of which contains one or more curious woodcuts from old originals. The author's method is to follow the child through life, and the chapters are birth, baptism, first years, education at home, toys and plays, holidays, school, higher education, orphans and abandoned children, disease and death.

Chinese Mother Goose Rhymes. Translated and illustrated by ISAAC TAYLOR HEADLAND. Fleming H. Revell Co., New York, 1900. pp. 157.

This is one of the most attractive of holiday books. The author thinks there are more nursery rhymes in China than in England or America. Each page has the original in Chinese, an illustrative picture, and the English translation, and in the dim blue background over it all we can trace outlines of Chinese babies in every attitude and act. One picture contains 1,700 tiny heads of Chinese babies, and the frontispiece is a salad of larger, mixed baby heads.

The Biography of a Baby, by MILICENT W. SHINN. Houghton, Mifflin and Co., Boston, 1900. pp. 247.

Miss Shinn here gathers together her own remarkable studies, which seem to be entirely rewritten, and summarizes with her own conclusions those of other studies in this field. It is a work that compares well with Preyer, although smaller, and is a good combination of original observations and literary presentation. It takes the child to the age of walking alone.

A Child's Garden of Verses, by ROBERT LOUIS STEVENSON. Illustrated by E. Mars and M. H. Squire. R. H. Russell, New York, 1900. pp. 115.

About sixty-five poems with illustrations, often full page and even colored, on elegant paper, make this among the most attractive of holiday books.

Concerning Children, by CHARLOTTE PERKINS (STETSON) GILMAN. Small, Maynard & Co., Boston, 1900. pp. 298.

We have here an interesting practical talk by a mother on the plays of children, unconscious schooling, the respect due to youth and the presumption of age, over consideration, children and servants, social parentage. The form of the book is unusually pleasing.

The Listening Child, by LUCY W. THACHER. With an introductory note by Thomas W. Higginson. The Macmillan Co., New York, 1900. pp. 408.

In these poems for children the writer has given prominence to imaginative authors like Blake and Emily Dickinson, and thus recognizes and would cultivate the ideal side of children, which is really the best side of their lives. The book is gotten up with pleasing type and paper.

Wie dient das Gymnasium dem Leben? Ein Beitrag zu den Aufgaben praktischer Geistesbildung, von PAUL CAUER. L. Voss Cie, Düsseldorf, 1900. pp. 50.

The writer here discusses the educational value and methods of teaching elementary astronomy, geography, administration and economy, politics, history, with a final chapter on a topic which has lately become very popular in Germany; viz., halfness and wholeness.

L'Éducation par l'Instruction et les Théories Pédagogiques de Herbart, par MARCEL MAUXION. F. Alcan, Paris, 1901. pp. 187.

M. Mauxion discusses the life, metaphysics, psychology, moral and religious theories of Herbart for sixty-eight pages, and then résumés his views of the possibilities, limitations, and end—the three great functions of education. Interest, experience and education, descriptive, analytic, synthetic, and political, formation of character, and the family follow.

Physical Culture, by B. F. JOHNSON. Primary book. B. F. Johnson Publishing Co., Richmond, Va., 1900. pp. 123.

Very easy lessons in physical culture and hygiene, with photographs of basket ball, model schoolroom, country schoolhouse, breathing exercises, children taking exercises, etc.

Résumé historique de l'école Normale Supérieure des Filles. pp. 38.

At last M. Nitobé, who spent some years in this country in his preliminary survey, has secured from the government of Japan his grant for building, equipment, and running expenses, and has this year laid the foundation of his school which is here planned, and to which girls will be admitted.

Geschichte der Japanischen Nationallitteratur von den ältesten Zeiten bis zur Gegenwart, von TOMITSU OKASAKI. F. A. Brockhaus, Leipzig, 1899. pp. 153.

The author begins with the literature of ancient times, the first chapter ending 600 A. D. The eighth, ninth, twelfth, thirteenth, sixteenth, seventeenth and nineteenth centuries are his divisions, so that it is a very comprehensive treatise.

On Training, by J. W. STOCKS. pp. 62.

There is nothing to tell where or by whom this little manual is published, but Mr. Stocks is a famous English cyclist, who held many long distance records in 1897, some time since which time the book is written. Mr. Stock's suggestions about initial work, training, proper eating, regimen generally; his chapter of tips on pose, ankle action, and wind; his advice about flesh gloves, sprinting and bathing, a week's work, sleeplessness, the day of the race, how to ride the scratch race, etc., are extremely interesting and suggestive.

Expansion under New World Conditions, by JOSIAH STRONG. The Baker and Taylor Co., New York, 1900. pp. 310.

This voluminous author sees danger in exhaustion of arable public lands which makes foreign markets a new necessity, and wishes a new world policy and life centering about the Pacific Ocean as a new Mediterranean, which must be an Anglo-Saxon sea.

World Politics at the End of the Nineteenth Century as Influenced by the Oriental Situation, by PAUL S. REINSCH. The Macmillan Co., New York, 1900. pp. 366.

The first part of this very opportune and up to date book treats (1) national imperialism; (2) the opening of China; (3) its conquerors; (4) German imperial politics; and (5) the position of the United States in the Orient.

Hygiène de l'âge de retour, par A. CASTAN. Baillière et Fils, Paris, 1901. pp. 296.

This is a characterization of the climacteric in women, the general conditions, and all by a man who has written voluminously on medical topics. The first part considers the normal menopause, exercise, clothes, corsets, baths, toilet, food, etc.; the second part considers the regimen of pathological cases; and the third part is devoted to operations.

Graded Lessons in Hygiene, by WILLIAM O. KROHN. William O. Krohn Co., Chicago, 1900. pp. 226.

This interesting compilation with seventy-five cuts treats food, drink, skin and kidneys, bones, muscles, blood, breathing, nerves and brain, eyes, ears, teeth, germs, physical exercise, first aid to the injured, and temperance. The language is simple and the matter clearly presented.

Gesundheit und Erziehung, von GEORG STICKER. J. Ricker, Giessen, 1900. pp. 238.

This physician writes in a very entertaining and somewhat hortatory way of the general conditions of health, especially for young children, interspersing his precepts with interesting incidents. His conception of the duty of a physician is somewhat platonic. It should be made for their interest to keep people well instead of sick. He would broaden the consideration of hygiene to include all phases of the question of population.

Source Book of English History for the Use of Schools and Readers. Edited by Elizabeth Kimball Kendall. The Macmillan Co., New York, 1900. pp. 483.

In the first chapter under Britons and Saxons are two extracts from Tacitus, two from Baeda, one from Charles the Great, and one from Alfred. Under English and the Danes there is something from Asser, Canute, and Ethelred. In the seventh chapter, Wars of the Roses, are extracts from Blakman, Stodeley, Chastellain, Warwick, and Warkworth. The last chapter, the twenty-second, on the Empire, has extracts from Parnell, Russell, Aberdeen, Tennyson, Bright, Forster, Steevens, Morley, and others.

Two Essays on Old Age and Friendship. Translated from the Latin of Cicero by E. S. Shuckburgh. The Macmillan Co., New York, 1900. pp. 210.

The translator's interesting introduction of twenty-two pages is mainly an amplification of Emerson's characterization of these papers as "charming by its uniform, rhetorical merit; heroic with stoical precepts; with a Roman eye to the claims of the State; happiest perhaps in his praise of life on the farm; and rising at the conclusion to a lofty strain."

Modern Perspective: A Treatise upon the Principles and Practice of Plane and Cylindrical Perspective, by WILLIAM R. WARE. The Macmillan Co., New York, 1900. pp. 336.

This, with the thirty large plates that accompany it, is an impressive presentation of this subject, coming as it does from a master in his art. The leading chapters are—perspective, the phenomena of the picture, division of lines by diagonals, by triangles, exact determination of direction and magnitude, of perspective lines, position of picture, parallel perspective and change of scale, oblique and three point perspective, that of shadows, reflections and circles, distortions and corrections, the human figure, curved and panoramic perspective, divergent lines and shadows by artificial light, etc.

The Principles of Mechanics. An Elementary Exposition for Students of Physics, by FREDERICK SLATE. Part I. The Macmillan Co., New York, 1900. pp. 299.

This is addressed to juniors who have some working knowledge of the calculus, and discusses under kinematics, speed, velocity, and acceleration; under dynamics, mass, force, impulse, momentum, work, kinetic energy, fundamental equations, force groups, harmonic motion and pendulums, law of inverse squares, weight systems, inertia, etc.

Outlines of Social Economics, by GEORGE GUNTON and HAYES ROBBINS. D. Appleton and Co., New York, 1900. pp. 218.

This work treats wealth, its production and its factors, prices, cost, distribution, wages, rent, interest, profits, socialism, single tax, profit sharing, labor organizations, panics, depression, and finally discusses the question whether we are really progressing.

Outlines of the History of the English Language, by T. N. TOLLER. The Macmillan Co., New York, 1900. pp. 284.

The writer gives us here a most attractive, scholarly, and even readable text book, which comes down to the end of the last century. He discusses the relations of English to other tongues, the Saxon shore and early settlers, the condition of learning in early centuries, the peculiarities of early diction in old English, decay in learning after the Danes arrived, and the important events in the fifteenth century which affected the language.

The Thought Reader, by MAUD SUMMERS. Book I. Ginn and Co., Boston, 1900. pp. 114.

This primer is written from the standpoint of images, not words; the thought is the reality and the sentence merely its outer expression. The author thinks that early reading matter should repeat the most familiar experiences of children, since his purpose is not to gain knowledge but to acquire a new art.

Elements of English Grammar, by GEORGE P. BROWN and CHARLES DE GARMO. Werner School Book Co., New York, 1900. pp. 255.

The first two chapters treat of the nature and kind of ideas and the manner of connecting them, the next two of their classes and the words to express them, and thought analyses are introduced throughout.

Botany. An Elementary Text for Schools, by L. H. BAILEY. The Macmillan Co., New York, 1900. pp. 355.

This is a well devised book with just 500 illustrations. It certainly conveys a great body of information through the eye, and if it does not indeed make the teacher or plants themselves quite superfluous, it seems to rather diminish their functions to an ancillary position.

A School Chemistry, Intended for Use in High Schools and in Elementary Classes in Colleges, by JOHN WADDELL. The Macmillan Co., New York, 1900. pp. 278.

This begins with water, hydrogen, oxygen, nitrogen, carbon dioxide, acid and alkali, and passes on to salt, the halogens, sulphur, carbon, metals, and is illustrated by ninety cuts.

Art History in the High School, by GEORGE PERROT. Translated by Sarah W. Moore. C. W. Bardeen, Syracuse, 1900. pp. 108.

The author is founder of the Chair of Classical Archæology in the French Academy, and with his collaborator, Chipiez, author of the well-known volumes on ancient art.

King Kindness and the Witch and Other Stories, by HELEN WELLS. Illustrated by Louisa A. Shrimpton. C. W. Bardeen, Syracuse, 1900. pp. 118.

These are eight storiettes for children named from the first.

Shakespeare's Life and Works, by SIDNEY LEE. The Macmillan Co., New York, 1900. pp. 231.

This is an abridgement chiefly for the use of students of a life of Shakespeare, with an appendix on aids to the study of his life and works and on the Bacon vs. Shakespeare controversy.

Selections from Plato with Introduction and Notes, by LEWIS L. FORMAN. The Macmillan Co., New York, 1900. pp. 510.

The text is clear, and the introduction concise and valuable, while the notes make up about one-third the volume. Most of the selections are about Socrates.

Publishing a Book, by CHARLES WELSH. D. C. Heath and Co., Boston, 1899. pp. 43.

This is a few practical hints to authors as to the preparation of manuscript, correction of proof, and arrangements with publishers.

The Happy Life, by CHARLES W. ELIOT. Thomas Y. Crowell & Co., New York, 1896. pp. 30.

The Art of Optimism as Taught by Robert Browning, by WILLIAM DEWITT HYDE. Thomas Y. Crowell and Co., New York, 1900. pp. 35.

The Poetry of the Psalms for Readers of the English Bible, by HENRY VAN DYKE. Thomas Y. Crowell and Co., New York, 1900. pp. 26.

These three little booklets, tastefully bound in white, are reprints of well known and valuable papers.

Heath's Home and School Classics. D. C. Heath and Co., Boston, 1900.

The Beginner's Shakespeare. A Midsummer Night's Dream. Abridged and edited by Sarah W. Hiestand. pp. 102.

Gulliver's Travels into Several Remote Regions of the World, by JONATHAN SWIFT. Edited by Thomas M. Balliet. Part I. A Voyage to Lilliput. pp. 104. Part II. A Voyage to Brobdingnag. pp. 112.

The King of the Golden River or, The Black Brothers. A Legend of Stiria, by JOHN RUSKIN. Edited by Professor M. V. O'Shea. pp. 57.

These are well selected books, clearly printed, and attractively and cheaply bound in paper.

In Memoriam. JONAS GILMAN CLARK. Born February 1, 1815. Died May 23, 1900. Atlantic Publishing and Engraving Co., New York, 1900.

This work is a token of love, and is prepared by Mrs. Clark as a memento to hundreds of friends of the founder of Clark University. It is a model of the bookmaker's art and is not in the market. It contains a brief biographical sketch; a statement of Mr. Clark's purposes in founding the university; an exposition of its plans by Senator Hoar and President Hall; an account of the funeral, with the address of the Rev. Calvin Stebbins; the resolutions of the faculty, and students; Mr. Clark's colleagues in the bank, and the public library which he founded at Hubbardston; and tributes from the four daily papers of Worcester; with this simple preface, "These passing tributes are here gathered in affectionate remembrance of my husband, and in loyal recognition of more than three-score years of close companionship with the high resolve and steadfast devotion to the achievement which crowned his life-work. Posterity is his heir, and his most enduring memorial the far-reaching influence of the university he has founded. Susan Wright Clark." Mrs. Clark had the assistance of Rev. Calvin Stebbins and Mr. John H. Jewett in some of the details of this attractive and fitting memorial.

Report of the Commissioner of Education for the Year 1898-99. Vol. I, pp. 1248. Government Printing Office, Washington, 1900.

After an introduction of eighty-eight pages of statistics and reports of education in the Philippines, Cuba, Porto Rico, and various States, the first part gives us a brief survey of education in Great Britain, Ireland, Australia, Belgium and Central Europe, Sweden, and Japan, to which are added chapters on classification and promotion of pupils; the development of the common school in the Western States from 1830 to 1865; an account of the Royal Normal College for the blind in London; minor mental abnormalities in children as occasioned by certain erroneous school methods, by Dr. Krohn; a long section on miscellaneous educational topics; the study of art and literature in schools; the Western Literary Institute and College of Professional Teachers; the United States Naval Academy at Annapolis; notes on the history of American text books on arithmetic; public education in Italy and its reform; educational training for railway service; university extension in Great Britain; bird's-eye-view of the St. Louis public school system in 1880; school gardens; education in France; confederate text books (1861-1865); list of educational periodicals in the United States; educational directory; applied geography; a review of Swedish gymnastics; the future of the colored race.

It is a little difficult to say on what principle some of these selections, viz., that of the St. Louis system of 1880 are made, or whether there is any significance in the order of topics. A fault finder might object to the lack of intellectual digestion in some of the reports on education in other countries, some of which, at least, seem too much like the dry compilations in our consular reports. The special significance of Dr. Mayo's story of certain Western schools from 1830 to 1865 has been so much better told elsewhere that one might question whether other matter could not be better used; whether the Western Literary Institute justifies so much space; whether Mr. Eaton's report on railway service should not have been condensed and reconstructed, are questions that will recur to the careful reader.

It is, however, on the whole, despite some rather sad shortcomings, a volume rich in material which every educator must have and ponder; and one of Dr. Harris's best achievements is to have brought this long belated publication now pretty well up to date.

The History of Colonization from the Earliest Times to the Present Day, by HENRY C. MORRIS. Vol. I, pp. 459. Vol. II, pp. 383. The Macmillan Co., New York, 1900.

This most timely work, we are told, is in part the satisfaction of personal need. In the first volume the author treats of the earliest colonization and that of Phœnecia, Carthage, Greece, and Rome. Next the Middle Ages are covered, beginning with the colonies of Amalfi and Pisa, and including those of Florence, Genova, and Venice. In modern times Portugal, Spain, Holland, and the French colonies are treated. The second volume traces the history of the English colonies, first in America; then in the East in general, and specifically in special chapters in Canada, Australia, South Africa, West Indies, Bermudas, and Ceylon, the crown colonies and protectorates, East India; with a general summary of the English policy and methods; and a final chapter on Scandinavian, Danish, and other colonies. These volumes are enriched by a valuable bibliography and a convenient index, which make them, as they ought to be, the best of all the many recent volumes upon the whole question of colonization.

The Boyhood of a Naturalist, by FRED SMITH. Blackie and Son, Ltd., London, 1900. pp. 227.

It is difficult to understand the *raison d'être* of such a book as this. The preface inclines us to think that Smith is not the real name of the author. I open at random to "Them are shrimps," he said, "in this bottle and a mixter of things in that." "Oh," I said, "I am obliged to you; it is awfully kind, but they won't live long like that, will they?" "Sartun sure they won't," said he. "You want 'em to live, do you?" "Why yes, if you please," said I. Again absolutely at random, "Did the old lady kiss me?" "Now I call that an impudent question; I do not think I am obliged to tell you, and I do not mean to, but if she did." In the preface, the author says "I have written about the boy who is, according to the adage, father of the man; I am only the man;" and the book ends "and so after all even I, I suppose, shall have to grow up." Thus it is a man attempting boy talk, but he gives others a mean opinion of his boyhood, for there is almost no science in it, little real love of nature, and still less knowledge of boy life.

La Réforme de l'Enseignement Secondaire, par ALEXANDRE RIBOT. Armand Colin et Cie, Paris, 1900. pp. 308.

The first part discusses the reform of the lycée, which should be in the direction of increased autonomy and a modified authority of the supervisors. The second part discusses education in general, its modern origin and the wrong which is done by the suppression of special training in the lycée; the dangers that menace classical training and the means of avoiding them; modifications in the programme; the requirements for the baccalaureate, examinations for admission, etc. The third part compares public and private education, and finds that the colleges and lycées are more stationary except in the increase of cost. In many parts of France there is dearth of institutions for secondary training, and the modes of recruiting the lycée, liberty of education and inspection need revision. In the last part the writer discusses the plans adopted by an educational commission including all these items, and we are given nearly one hundred pages from the depositions of Berthelot, Lavisse, Boutmy, Poincaré, and Bourgeois.

L'Éducation au Point de Vue Sociologique, par J. ELSLANDER. H. Le Soudier, Paris, 1899. pp. 336.

This book is divided into three parts, the first of which considers education from the sociological point of view, discussing modern reformatory theories, sociological arguments, the law of struggle for existence, and the evolutionary energies. The second part discusses modern education, physical, intellectual, and moral. The third part treats of the general plan of rational education for the first period of life and for "second infancy," which is the author's term for puberty.

L'Éducation Présente, Discours à la Jeunesse, par LE PÈRE DIDON. Plon-Nourrit et Cie, Paris, 1900. pp. 414.

The culture of the will, the duties of educated youth, contemporary youth, the Lacordaire school and its regimen of liberty, the choice of a career, the man of action, the intellectual and social duties of youth, national education, free school, athletic sports, and the religious school are the topics considered in this rather brilliant book, which has reached the third edition.

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